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COMMERCIAL CAR JOURNAL

THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS



JOIN THE

REO

Hall of Fame!

"They shall not pass," Horatius vows

As he halts the overweight line;

"Get Reos for the profit-plus

Of More-Pay-Load-Design!"



HORATIUS says: "Don't let legal weight or length limits stand in the way of profitable operations. Look to Reo's More-Payload designs for the solution—the new 160 hp. Powered Models F22R and F50 tractors permit you to haul a 35-foot trailer within the 45-foot over-all length limit. These sensational new heavy duty Reos haul more cargo faster... deliver greater ton-mile earnings."

REO MOTORS, INC.
Lansing 20, Michigan

SEE THE POWERFUL, NEW MODEL F-50 REOS WITH THE MOST
EFFICIENT 50,000-LB. G.C.W. TRUCK ENGINE EVER BUILT

TRUCK OWNERS!

You tell us what your present truck is worth in trade on a brand-new DODGE



Dodge trucks give you:

7 great engines with 100 to 171 h.p. • Advanced braking • No-shift Truck-o-matic transmission available in 1/2-, 3/4-ton models • Shorter turning than competitive makes • Unusually low loading height • Completely rustproofed sheet metal • Full-vision, solid-comfort cabs.

Save money every mile with

DODGE
"Job-Rated"
TRUCKS

Fill in the appraisal form below, mail it to your Dodge dealer! He's anxious to trade and will do his level best to meet your terms!

No cost, no obligation!

Here's your chance to make the trade of a lifetime on a brand-new Dodge "Job-Rated" truck! And there's no dickering, no beating about the bush! Just do this:

Decide what you believe your present truck is worth. Put your trading price on the appraisal form below, tear out the form and mail it to your Dodge dealer. He's anxious to trade, and will do his level best to meet the price you put on your present truck. If he can't meet your price, there's absolutely no obligation. If he can, you've got a "name-your-own-price" deal! You've everything to gain, nothing to lose, so mail the appraisal form today!

Cut out and mail this appraisal form to your Dodge dealer!

or phone in the information

(See Classified Section of Telephone Directory for address)

I have a _____ truck, in _____
(year, make, model) (good, fair, poor)

condition. I think it is worth \$ _____ in a trade.
I understand that you are not obligated to meet this price,
nor am I obligated to accept it.

Name _____

Mailing Address _____

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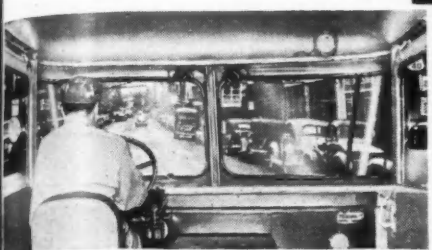
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BETTER VISION . FEWER ACCIDENTS!

The driver who sees better drives better. This E-Z-Eye Non-Glare Panoramic Windshield provides vision on all sides. Standard Equipment.

ALUMINUM ALLOY — BIG FAVORITE

Particularly in areas where acids, industrial gases and atmospheric conditions in general are likely to be most trying.



INSURANCE AGAINST HIGH DELIVERY COSTS

ALUMINUM ALLOY BODIES — pay Dividends that Far Exceed Investment!

Repairs of corroded steel bodies often exceed their initial cost. Olson Kurb-Side bodies of 1/8-inch, heat-treated aluminum alloy insure you against these expensive repairs and last twice as long as steel bodies. Thick aluminum also insures against 90% of all routine denting—yet weighs substantially less than thin sheet steel.

HALF THE WEIGHT CARRIES TWICE THE LOAD

Olson Kurb-Side Bodies of strong, light aluminum alloy weigh 1,000 lbs. less, carry half-a-ton more and drastically reduce costs for gasoline, tires, clutches, brakes, bearings, springs, etc. For instance, the 300-cubic-foot Kurb-Side weighs only 980 lbs. . . . the 360-cubic-foot Kurb-Side—1,170 lbs. . . . 440-cubic-foot Kurb-Side—1,370 lbs. . . . the 560-cubic-foot Kurb-Side (15 ft. long)—1,663 lbs.

SAVE "EXTRA" COSTS

These costly features are standard equipment on Olson Kurb-Sides without extra cost: E-Z-Eye Safety Glass, Panoramic Windshields; 31-inch-wide sliding side doors with roll-down windows on both sides; completely insulated roof, including driving compartment; square wheel housings; 78-inch-wide loadspace, free of cumbersome posts and ribs; rugged, aluminum extrusion rub-rails; separate side-panel skirts; safety-treaded entrance steps; massive rear bumper and step extending 9 1/2 inches back from the rear panels; thick bitumastic undercoating and silencing; choice of 38" or 58" double rear doors with or without glass (full-width rear doors at extra cost); and hardware worthy of aluminum bodies that last indefinitely.

GET THIS INSURANCE PROTECTION AT ONCE

Olson Kurb-Side economies pay for your trucks through savings—that's low cost insurance! Available on the finest forward-control chassis—Chevrolet, Ford, GMC! Ask your dealer for a demonstration or write us for *Truck Buyer's Guide*—The ABC's of Route Truck Selection. Also, ask for Comparative Operating Costs of aluminum alloy bodies vs. steel bodies.



1/20" Steel 1/8" Aluminum
Thin Steel (1/20") dents easily
Thick aluminum alloy (1/8")
saves 90% of routine denting



J.B.E. OLSON CORP.

1740 BROADWAY • NEW YORK 19, N. Y.

YOURS—Without Obligation!

Send us *Truck Buyer's Guide* plus *Comparative Cost Chart* showing operating costs of aluminum bodies vs. steel bodies.

Individual _____
Firm _____
Address _____
City _____ Zone _____ State _____

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COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance

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COMMERCIAL CAR JOURNAL, August, 1953

ccj READER DIGEST

ICC Leasing Regulations

First published 27 months ago, the Interstate Commerce Commission's leasing regulations are still a hot topic of discussion. With the effective date less than a month away—September 1, COMMERCIAL CAR JOURNAL, as a special service and in cooperation with the ICC, brings fleetmen a detailed analysis of these rules as they stood at press time. Page 64.

Cool Shop in the Sun

W. K. McNamara, municipal garage superintendent, city of Miami, Fla., tells about the city's new fleet shop that has an unobstructed floor area about 191 ft long by 65 ft wide. Roof construction is of quarter-barrel and sawtooth design, with windows opening to the north to provide natural lighting without glare and maximum ventilation for this fully equipped shop. Page 66.

Some Causes and Cures of Valve Seat Distortion

Longer valve life resulting from improved valves and valve rotation can be extended further by paying careful attention to proper valve seat maintenance say J. A. Newton and M. J. Tauschek, Thompson Products, Inc. In this trouble shooting guide, excerpted from a recent SAE paper, they tell how to recognize and correct valve seat problems. Page 70.

How Much is that Salesman's Mile Worth?

Here are some answers to car fleet cost problems based on a survey of 188 companies representing more than 25,000 cars. Included in this report by Blaine S. Britton, editor, *Sales Service*, The Dartnell Corp., are examples of how companies determine how much car allowance to pay as well as recent trends in answering the question of whether salesmen's cars should be company owned, leased or salesman owned. Page 72.

Radio Weather Roundup—Would it Help You

Jim Fidler, top flight weatherman who gives a nationwide daily weather report over NBC-TV each morning, says fleetmen could co-operate to get accurate information on weather and highway hazards. In this especially written article, he illustrates how such a plan would work, asks fleetmen what they think of the idea. Page 78.

Adding up the Legislative Year

Supplementing COMMERCIAL CAR JOURNAL's state-by-state reports (included each month as part of the news Roundup), National Highway User Conference's Arthur Butler gives a country-wide summary of the new laws affecting truck and bus fleetmen that have been enacted by the 44 state legislatures meeting this year. Page 80.

THERE'S NO SUCH THING AS NORMAL CONDITIONS IN THE FLEET BUSINESS

FIFTY MILES to the nearest garage! An ignition failure on this Colorado run could ruin a schedule. Reason



enough for using BLUE STREAK heavy duty points. These high - amperage tungsten points have a 55.4% larger surface which reduces arc-at-break

heat and cuts pitting and burning to a minimum. Add bakelite impregnated linen rubbing blocks, diamond-reamed bushings, Beryllium Copper shunts (for super-conductivity), stainless steel springs individually shaped, tempered and tested—and you've got the ruggedest points that money can buy. Yes, BLUE STREAK heavy duty ignition parts can make the difference between meeting a deadline and not. Try them. Standard Motor Products, Inc., 37-18 Northern Blvd., Long Island City 1, New York.

Blue Streak



PIONEER IN HEAVY DUTY IGNITION

WHAT'S YOUR TRUCK TIRE PROBLEM?

LONGER, COOLER HIGHWAY MILEAGE?

Your answer is— **NEW Super-Tough XTRA TRED!**

- **UP TO 54% MORE MILEAGE** than even previous Xtra Treds
- **NEW Super-Tough rubber compound** never before available
- **UP TO 50% MORE NONSKID DEPTH** than standard truck tires
- **ALMOST TWICE AS MANY** stopping and starting edges give better traction forward or reverse
- **COOLER-RUNNING** road tread
- **COOLER-RUNNING** shoulder vents
- **NEW** shoulder contour reduces flex strains
- **NEW** rib-grooves scientifically designed to prevent cracks

*Your choice of Rayon or All-Nylon Cord
—Ideal for every wheel on your truck!
Goodyear, Truck Tire Department,
Akron 16, Ohio*



EFFICIENCY ON AND OFF THE HIGHWAY?

Your answer is— **Double-Duty ROAD LUG!**

ON THE HIGHWAY —

- **SMOOTH CENTER** rolls smoothly, wears slowly and evenly
- **TREAD PATTERN** ideal for multiple stop-and-start operations
- **ARMORED SIDEWALLS** protect against curb pinches and scrapes

OFF THE HIGHWAY —

- **CROSS-BAR LUGS** give equally powerful traction, forward or reverse
- **ARMORED TREAD AND SIDEWALLS** shrug off stones, snags and tire-punishing ruts
- **EXCLUSIVE TREAD** gets you in, gets you out — and keeps you going!



Xtra Tred, Road Lug—T.M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

GOODYEAR

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

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How to Win Friends and Influence Votes

MEMBERS of the Senate Committee on Interstate and Foreign Commerce had a knotty problem on their hands last month. The question: What should they do about the House-approved trip-leasing bill (H.R. 3203)?

In barest and most important essentials the bill was designed to prohibit the ICC from regulating the *duration* of a lease; and the *amount* of compensation to be paid; i.e., denied ICC the authority to outlaw leasing for periods of less than 30 days.

Ironically the bill had no popular appeal. To the average citizen it was just another piece of technical wordage. Similarly, it had no sex appeal for the average Senator. It was almost a foregone conclusion that once on the Senate floor, it would pass by an overwhelming vote, just as it had in the House.

Yet to truckers concerned with interstate shipments, to many farm groups, to labor and to the railroads, it had vital significance. As we probed into the situation for the study which begins on page 64, the background, and the line-up of opposing forces became more and more interesting.

When the ICC drew up its leasing regulations in 1951, the passage aimed at prohibiting trip leasing was included. Argued the ICC: It is obvious a truck line cannot possibly have as much control over the maintenance of a truck that it does not own, nor over a driver it does not employ, as it does over its own vehicles and its own personnel. Hence highway safety is at stake. The reasoning continued: The only way to solve the problem is to set up specific rules on leasing practices; require a lease of sufficient duration to permit exercise of minimum control standards.

This reasoning makes a lot of sense. But it also creates many important hardships. Perhaps the easiest of these to visualize is the exempt carrier who follows the farm markets. In the Winter he may haul fruits and vegetables from Florida to

northern markets. Later he may haul potatoes south from Maine. And so on ad infinitum. His rate structure is based on the probability that he can secure return loads by leasing himself and his rig to authorized carriers. This practice has the strong backing of many farm groups including the National Grange.

On the other hand some common carriers, jealous of the exempt commodity carriers, want this business themselves; argue in favor of the leasing ban. Labor unions, aware of the fact that the trip leasers often take cuts in their own commission to get the return load, feel the ban would strengthen labor's position. And the railroads, always ready to pitch in when there is a chance to get more restrictions on their biggest competitor, have joined up in force.

As the arguments unfolded before many an ICC hearing, no modification was secured; the trip-lease ban remained. So the case was taken to the Supreme Court. In due time the decision came down upholding the ICC ban.

As a last ditch stand proponents of the short lease mustered their forces; introduced H.R. 3203 which supersedes the Supreme Court decision.

The bill passed the House by overwhelming voice vote; went to the Senate; there hung in the balance of the Interstate and Foreign Commerce Committee as this issue went to press.

If the committee sent the bill to the floor it was almost certain of passage. The farm vote would be happy; labor unhappy. If it let the bill die in committee, the man on trip leasing would remain on the books solely by lack of action. Labor would be pleased; farmers displeased. Either way truck interests would be divided.

After 2½ years of debate, and less than six weeks from the Sept. 1 deadline, the issue lay before a handful of committee members eager for early adjournment. It's a spot to remember when we see which way the pendulum swings.

Bart Rawson
Editor

HOW TO GET MORE MILES PER GALLON



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At Your Service

TIMELY NOTES ON MAINTENANCE AND OPERATION

by MURRAY SIMKINS Managing Editor

Valve Temperature Check

VINCE YOUNG, of Eaton Mfg. Co., says that you can tell whether a valve is operating at a dangerous temperature with a magnet. Scrape off the gray deposit on the valve, he suggests, and see if it is magnetic. If so, the valve is operating at too high a temperature.

Studebaker Modifications

A NEW gas gage is available for the Studebaker 2R series. This unit has a small brass weight on the indicator which dampens out vibration and assures a more accurate reading on the gage.

An improved universal joint cross and bearing assembly can be substituted for the old one on the 2R series. The new cross has smaller but more numerous rollers.

Servicing Bendix Drives

CARE should be observed in cleaning and lubricating the Bendix starter drive assembly if proper operation is to be expected. The unit should not be dipped in washing solution as this will remove the lubricant under the screw shaft. Gasoline is not a good cleaning agent either. Kerosene can be applied with a brush, or the screw can be wiped with a cloth dampened with kerosene. A light film of SAE 10W oil (5W for extremely low temperature) should be applied.

IHC L and R-Line Starter Modification

THE high torque developed by Delco Remy cranking motors tends to cause excessive bearing wear when cranking loads are continuously high. Cumulative wear may eventually allow the armature core to touch the pole pieces resulting in motor failure.

Since natural flexing of the armature shaft under heavy loads aggravates this condition, longer intervals of operation can be obtained by the addition of a center bearing which acts as a steady rest. The center bearing does not fit the shaft closely, but does limit shaft deflection.

Center bearings for Delco Remy starter models 737-Z, 740-N, 1107967 and 1108130 are available. (Some applications may require a longer cable between starter and battery after modification.)

10-in. Radius Trailers Corners

ACCORDING to A. E. Williams, of Fruehauf, the 10-in. radius corner trailer is most practical and will become the most popular type. This radius provides for the ultimate in floor area and cubical capacity, he told the Common Carriers Conference recently, and at the same time allows for good jackknifing clearance. The 10-in. corner for all practical purposes provides a square inside corner for pallet loading and maximum cubage, has a swing radius of only three inches more than the 18-in. corner and can be used with a 35-ft trailer and stay within a 45-ft combination length, if tractors of a compromise nature between a COE and a conventional type were available.

Some Handy Data

TO FIND circumference of a circle multiply diameter by 3.1416.

To find diameter of a circle multiply circumference by .31831.

To find area of a circle multiply square of diameter by .7854.

To find area of a triangle multiple base by $\frac{1}{2}$ perpendicular height.

To find surface of a ball multiple square of diameter by 3.1416.

To find solidity of a sphere multiply cube of diameter by .5236.

To find cubic contents of a cone, multiply area of base by one-third the altitude.

Doubling the diameter of a pipe increases its capacity four times.

A gallon of water (U.S. standard) weighs $8\frac{1}{3}$ lb and contains 231 cu in.

A cubic foot of water contains $7\frac{1}{2}$ gal, 1728 cu in., and weigh $62\frac{1}{2}$ lb.

To find the pressure in pounds per square inch of a column of water multiply the height of the column in feet by .434.

Steam rising from water at its boiling point (212 deg) has a pressure equal to the atmosphere (14.7 lb to the square in.).

To find capacity of tanks any size: given dimensions of a cylinder in inches, to find its capacity in U.S. gallons: Square the diameter, multiply by the length and by .0034.

To find the capacity of an air compressor in cubic (TURN TO PAGE 12, PLEASE)

Mr. Harry B. Kruse, owner, 1007 Tenth Street, Tampa, Florida



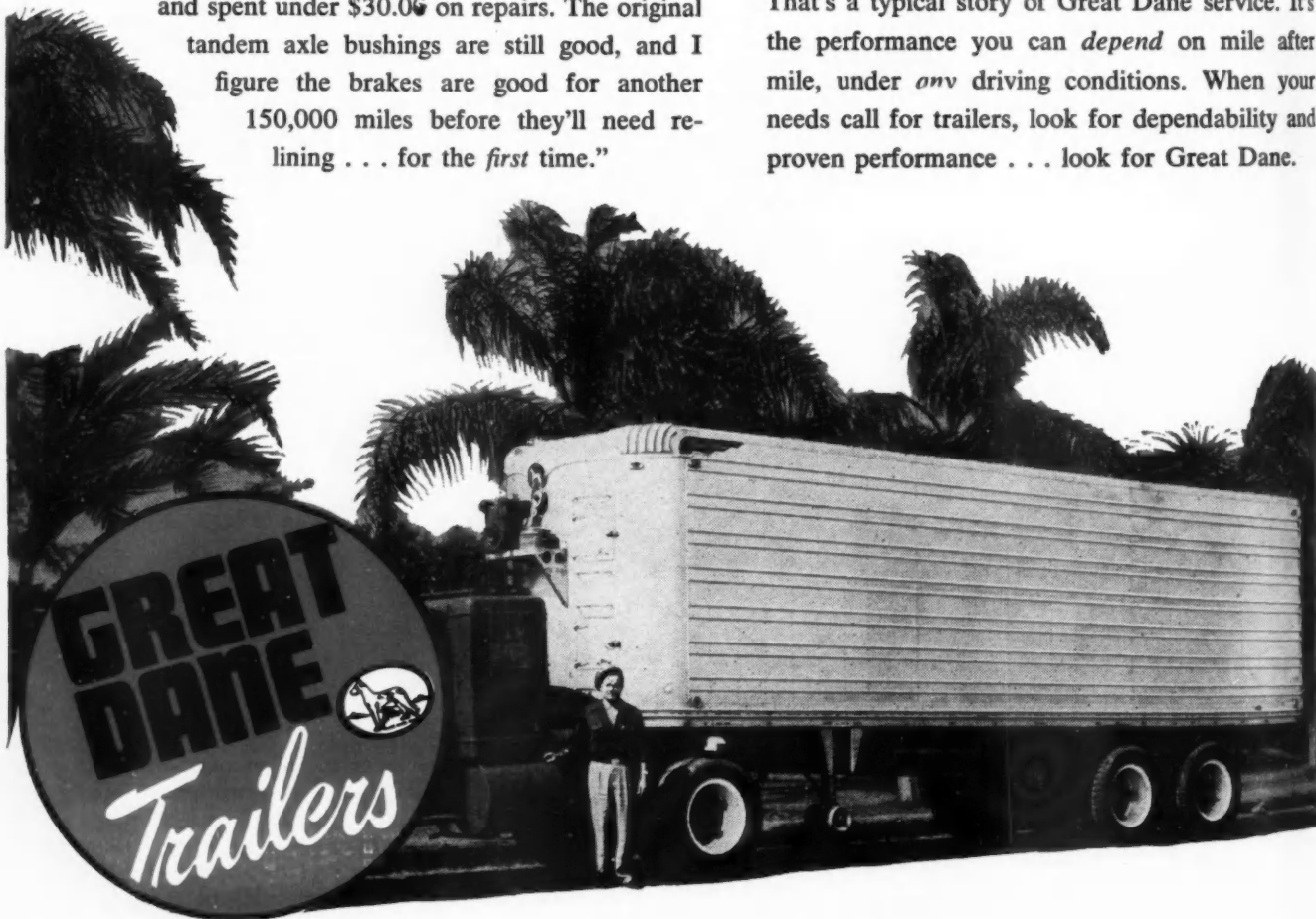
**Repairs less than \$30⁰⁰
for 385,000 miles traveled**

Performance proves Great Dane superior!

Proof-positive that Great Dane can give YOU better performance with less maintenance costs. Take a tip from Harry B. Kruse of Tampa, Florida. Mr. Kruse says: "In 1950 I bought a Great Dane aluminum refrigerated produce van. Since that time I've traveled 385,000 miles with it, worn out two tractors and spent under \$30.00 on repairs. The original tandem axle bushings are still good, and I figure the brakes are good for another 150,000 miles before they'll need re-lining . . . for the first time."

Mr. Kruse says he's hauled in all weather conditions from Florida up the Eastern seaboard to New York, to Cleveland, Chicago, Kansas City and occasional trips to California. And he's never had trouble with his Great Dane trailer.

That's a typical story of Great Dane service. It's the performance you can *depend* on mile after mile, under *any* driving conditions. When your needs call for trailers, look for dependability and proven performance . . . look for Great Dane.



SAVANNAH, GEORGIA . . . Over the long haul, Testimony Proves it's Great Dane

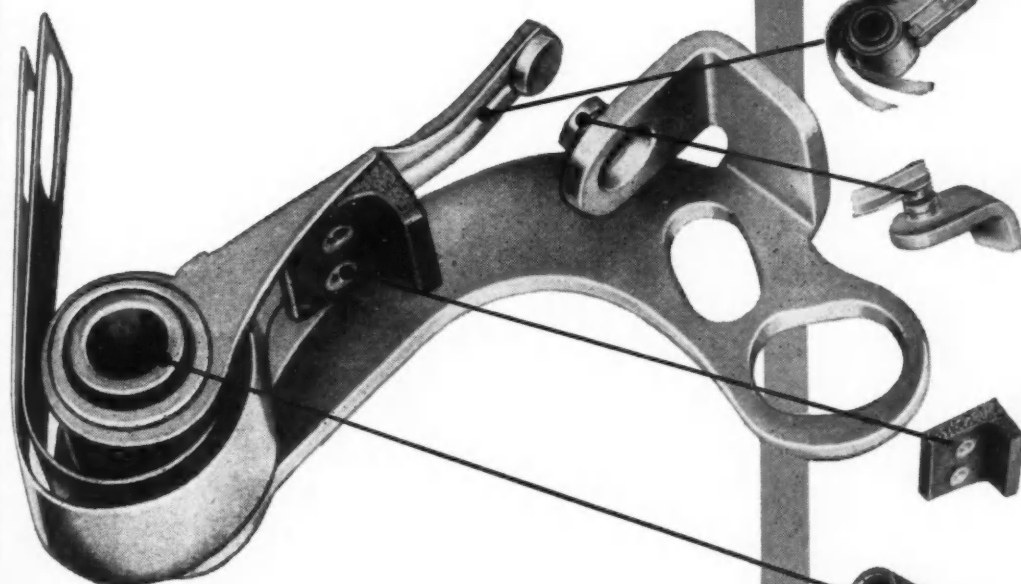
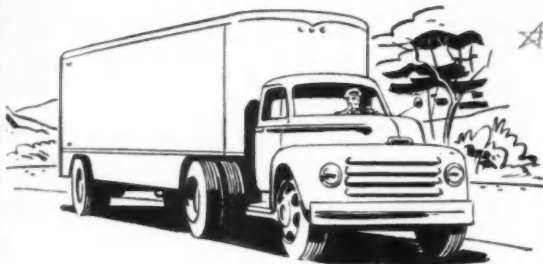
The "Unseen Differences" Built Into...

AUTO-LITE SERVICE PARTS

★ **REDUCE COSTLY "BREAK DOWNS"**

★ **ASSURE BEST PERFORMANCE**

★ **HELP BOOST PROFITS**



RIBBED ARM
helps provide extra strength with less weight assures smooth, efficient performance even at highest speeds.

TUNGSTEN POINTS
of pure end-grained tungsten, withstand greater "pounding" and terrific arc heat of 3500° F. for long life.

RUBBING BLOCKS
of special material that withstands tests equivalent to 50,000 engine miles assuring accurate contact needed for best performance.

SERRATED SLEEVE
of a special design makes it impossible for bushing to slip or come loose . . . keeps close tolerance.

Auto-Lite Contact Sets are a typical example of how Auto-Lite Ignition Engineers have improved and developed—often through more costly design and manufacture—great "unseen differences" that help fleets keep rolling for bigger profits. These "unseen differences" built into Auto-Lite Original Service Parts guarantee best performance and dependability . . . proved by this fact: more than half of America's car and truck makers specify Auto-Lite. Insist on Auto-Lite quality in your fleet.



THE ELECTRIC AUTO-LITE COMPANY
Parts & Service Division
Toledo 1, Ohio

**MONEY CANNOT BUY BETTER
AUTOMOTIVE ELECTRICAL EQUIPMENT**



for
SAFE
Sure
Starting

you can
rely on
Leece-Neville
AIR
Cranking
Motors



Where there is danger of fire or explosion, Leece-Neville Air Cranking Motors will start diesel, gas or gasoline engines with complete safety. Whether air cranking is preferred for safety or other reasons, you can rely on an L-N Air Motor for ample cranking power regardless of low temperature or infrequent use.

Model shown is rated at 25 HP nominal at 100 p.s.i.

Send for all the facts today.

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RELY ON**

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CUSTOM ENGINEERED

AC-DC Alternator Systems • DC Generators • Starting Motors • Regulators • Switches • Small Motors • Air Starters

for truck, bus, diesel, off-highway, passenger car, railroad, marine, industrial installations

The Leece-Neville Co., Cleveland 14, Ohio
Yes, send me the facts on L-N Air Cranking Motors

Name

Title

Company

Address

City

State

**MAIL
TODAY**



At Your Service

Continued from Page 9

feet of free air per minute: Multiply the area of low pressure cylinder (on compound compressor), or area of simple compressor cylinder in square inches, by the stroke in inches, and divide by 1728; and multiply this result:

- (a) In single acting, simple or compound, by the rpm.
- (b) Double acting, simple or compound, by 2 x rpm.
- (c) Duplex double acting, by 4 x rpm.

What About Tire Balancing?

TRUCK operators and factory engineers do not appear to agree on the need for tire balancing in trucks and buses. Few fleets are actually balancing tires and rims and wheels—but many fleets are experiencing front wheel shimmy and road wander sometimes attributed to unbalanced conditions.

A representative from a tire company insists that balancing of the assembly is not worth the cost in time and effort—except on sensitive vehicles. He said that if tire manufacturers go to closer tolerances in tire balance, the cost will be somewhat higher and that this is not justified in view of the minor troubles resulting. He suggested that many other factors enter into wheel unbalance, such as brake adjustment, drum conditions, bearing wear, improper bearing adjustment, wear in spindles, tie rods and steering knuckles, improper alignment conditions. These factors, he said, should be checked before the tire is blamed for the unbalance.

The following was suggested: 1. buy vehicles which perform satisfactory when new, 2. specify tire replacements to meet individual requirements, 3. check front end wear and adjustment frequently.

Distributor Tool—Chevrolet

THE distributor point retaining nut on all 1953 Chevrolet distributors is a slotted nut which sets in a recess in the bakelite insulator. This nut must be loosened to enable removal of the breaker arm.

A tool may easily be made in the shop by drilling a short piece of 3/8-in. drill rod to provide screw clearance and then filing the end to provide contact projections to fit slots in nut. Another simple method is to file a slot in a short bladed screwdriver having a 3/8-in. bit.

Chevrolet Shaft Coupling Fit

A LOOSE fit of the rear axle pinion shaft to the coupling of the propeller shaft has been incorporated into all passenger, sedan delivery and one-half ton axles. This is a change from the hard press

(TURN TO PAGE 14, PLEASE)

NOT A SINGLE TIRE LOST IN NINE MONTHS OF HEAVY LOGGING

Lee Know-How Did It!

A rough-and-tough logging operation is always one of the worst tests of a tire. And this one from the Lee Service Files was really murder! Tires were being ruined wholesale. The pile of discards was higher than the biggest load of logs coming in.

PROBLEMS

1. To reduce the bruise breaks that were ruining carcasses (some were discarded with only 10% of tread worn off)
2. To provide positive traction in mud, snow and ice

Operation—Hauling timber out of the woods to a sawmill in the upper peninsula of Michigan

Equipment—Straight trucks and tractors with pole trailers

Axle Loads—Heavy

Speed—Slow in the woods—up to 50 mph on highways

Roads—Temporary roads, bulldozed through rugged forest-land, bad holes, bad grades, big stones and stumps, typical of back-country logging; also improved roads to sawmill

Tires Used—8.25-20, most with regular ply carcasses, some with highway type tread, others with off-the-road tread

Average Mileage—Very low

RECOMMENDATIONS

After checking tires on junkpile for clues, and after checking into reasons for failures, Lee made its recommendations.

Because of primitive roads and heavy loads, a much stronger tire carcass was needed, and Lee recommended a tire with an extra ply rating . . . 12 PR in this case . . . to be used on wide-base rims.

Because extra protection was needed against bruising, Lee recommended the Lee Cleat Rib Tire, which has an extra-heavy tread and thick undertread.

Because more traction was needed in bad weather, the Lee Cleat Rib Tire was just what the doctor ordered. It has big, deep-cut nondirectional cleats to help prevent spinning or slippage.

Because of stumps, stones and other jagged objects in the road, Lee recommended the Cleat Rib tire, in which the rubber is specially compounded to resist cutting, tearing and chipping.

RESULTS

After 9 months of continuous logging, not one tire has been junked for any reason.

Tires get a better grip, don't slip or spin. Trucks have better traction and keep the loads moving. No time lost for haulouts. No roads blocked by stuck trucks.

. . .

Maybe your tire problem doesn't involve heavy loads on rugged roads. But whatever your fleet operation, Lee men are prepared to study it "from the ground up," and to make recommendations that fit your needs. If you have a tire problem, bring it to Lee.

Lee Rubber & Tire Corp., Dept. 2-H
Conshohocken, Pa.

Please send me information about your special engineering survey for truck fleets.

Name _____

Company _____

Address _____

| | | | | | | | |
|--------------------|------------------|------------------|----------------------------------|--------------------------|--------------|------------------|--------------------------|
| H.D. Commercial | 5-Rib Highway | 7-Rib Highway | Extra Tread— Delivery Service | Logger— Rural Service | Cleat Rib | Cleated Tread | Cleated Tread Special |
|--------------------|------------------|------------------|----------------------------------|--------------------------|--------------|------------------|--------------------------|





LEE RUBBER & TIRE CORPORATION CONSHOHOCKEN, PA.



HEAVY DUTY CLUTCH PLATE

- standard-drilled extra-heavy facings wear better
- heat-treated multiple-riveted hub & disc last longer
- self-aligning splines install easier

Write for Name  of Nearest Jobber

Accurate PARTS MFG. CO.

12435 EUCLID AVENUE • CLEVELAND 6, OHIO



At Your Service

Continued from Page 12

fit used in 1952. At the same time, the pinion bearing nut has been redesigned and a propeller shaft coupling spring has been added to provide fore and aft tension on the propeller shaft. The change went into effect approximately the first of the year.

Chevrolet Service Pistons

SERVICE aluminum pistons are available in standard sizes and .020, .030 and .040-in. oversize. The standard sizes consist of regular and high limit sizes so that proper clearances can be obtained for slightly worn cylinder bores and blocks requiring slight honing to clean up the bores.

For identification, the cartons of all pistons are stamped with the size of the enclosed pistons and in addition, each standard size piston is identified by an ink stamp on the piston top. All pistons are unitized in a carton of six according to size. Unitizing for weight is not necessary with aluminum pistons because of the close tolerance to which the weight is held.

What Causes Preignition?

S. D. HERON, of the Ethyl Corp., reviewed experience with aircraft engines in an SAE symposium on preignition at Atlantic City Summer Meeting. A few variables which influence the tendency to preignition, he said, are as follows:

The more sensitive the fuel the greater the tendency to preignite.

Increase of fuel-air ratio has a marked effect in suppressing preignition.

Retarding the spark has been shown to be very effective in reducing the tendency to preignition arising from spark plugs. This was determined in a water-cooled engine and has not, to the author's knowledge, been confirmed in aircraft engines. (It has been stated on reliable authority that spark retard aggravates "after-running." Spark retard, in general, reduces cylinder wall temperatures and this may promote deposit accumulation which will in turn promote after-running.)

Plugs which are too hot for the engine condition of operation are a major cause. Cracked or broken ceramic insulators in plugs which are suitable when undamaged, have been a potent source of trouble. A broken piece of core held from falling into the cylinder by means of the ground electrodes can have particularly vicious effects. In a similar case, where the ground electrode construction allows the broken piece to fall into the cylinder, preignition may not occur. In fact, such broken plugs in some cases have higher preignition ratings than an unbroken plug of the same type.

(TURN TO PAGE 18, PLEASE)

COMMERCIAL CAR JOURNAL, August, 1953

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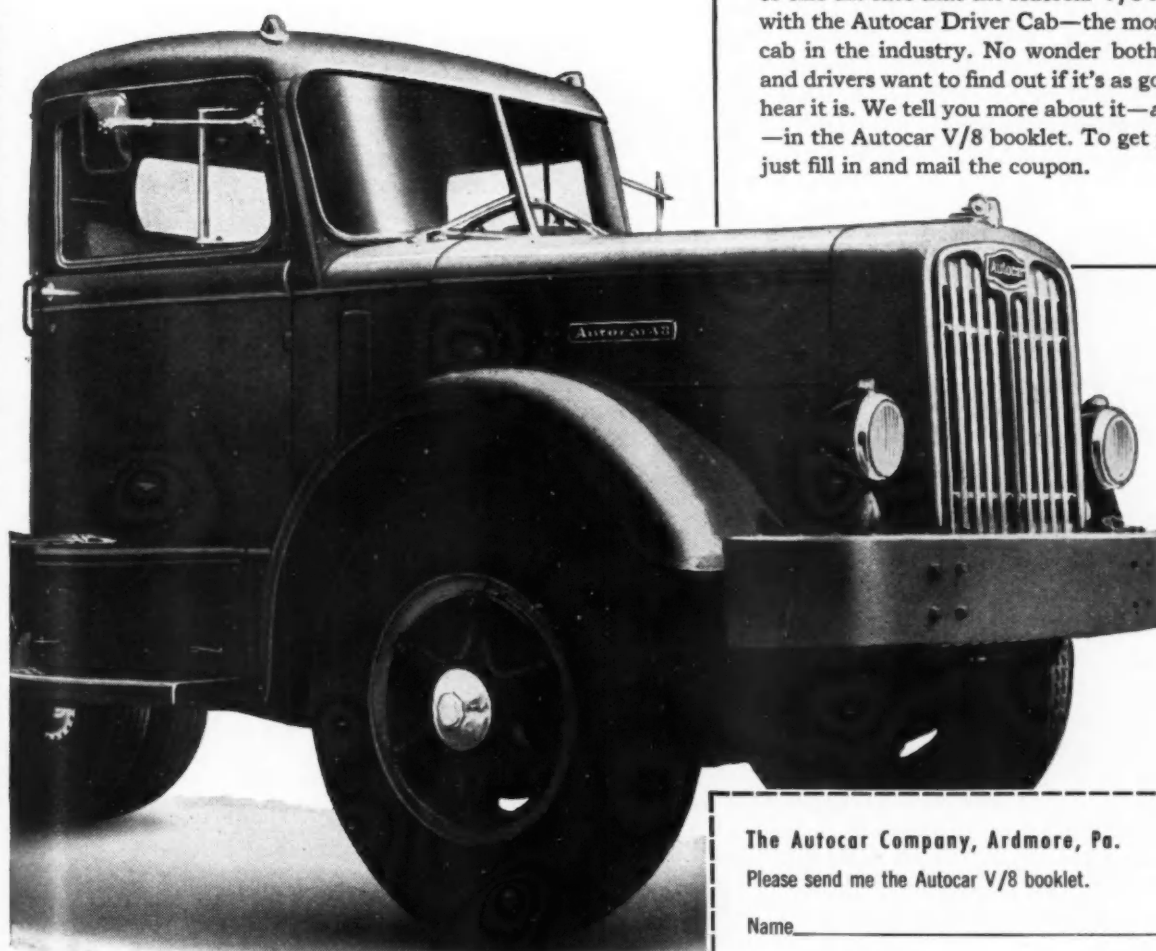
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, 1953

MOST TALKED-ABOUT TRUCK ON THE ROAD

The Autocar V/8



The first Autocar V/8s were delivered to a few customers only a year ago. Now, 12 months later, they're the talk of the industry and, judging by the flood of inquiries and orders, almost everybody wants them. The news has spread by word of mouth. One owner, for example, is making four inter-city trips instead of three. A number of drivers of other vehicles have discussed the V/8 after seeing it pull away from them on hills. All in all, it is recognized that Autocar has something very unusual in its precedent-shattering V/8. Add to this the fact that the Autocar V/8 is equipped with the Autocar Driver Cab—the most imitated cab in the industry. No wonder both operators and drivers want to find out if it's as good as they hear it is. We tell you more about it—all about it—in the Autocar V/8 booklet. To get your copy, just fill in and mail the coupon.

AUTOCAR TRUCKS
THE AUTOCAR COMPANY • ARDMORE, PA.
Established 1897
Factory Branches and Distributors from Coast to Coast in the U.S. and Canada
Export Division: Drexel Building, Philadelphia 6, Pa., U.S.A.

The Autocar Company, Ardmore, Pa.

Please send me the Autocar V/8 booklet.

Name _____

Company Name _____

Address _____

Number of trucks in fleet _____

Type of operation _____

3H

WASHINGTON RUNAROUND

by KARL RANNELLS Washington Correspondent

Leasing . . . Still Undecided

Backers of legislation (HR 3203) to knock out ICC authority to ban tripeasing for less than 30 days were stubbornly fighting in mid-July to get the House-passed measure up for a vote in the Senate. Senate passage was generally considered certain—if room could be made on the crowded calendar before adjournment—in view of overwhelming House approval. Senate committee hearings were held to two days, the group relying strongly on extensive testimony presented at House hearings. Enactment of the bill would kill only ICC authority to put time limits on trip leasing and to regulate division of payment—leaving remainder of MC-43 intact, effective Sept. 1. For details see page 64, this issue.

Quick Rates . . . Slowed

With Congress working for adjournment by the end of the month, chances were dim in late July for passage of the so-called quick-rate bill (S. 1461). This would make it mandatory for ICC to either grant rate increase applications by all carriers within 60 days or to permit an interim increase at once while the Commission was making up its mind. Opposition by agriculture, the ICC, and others has made the bill so controversial as to virtually kill its chances now.

Mail . . . Maybe More by Truck

Postal officials are deep in a study of transport problems—with a definite possibility that highway fleets will get more mail contracts—and for longer trips. Short hauls by truck are already successful. Also, air transport may get bulk-mail contracts if a try-out, now scheduled, is satisfactory. One reason for pending changes is a slowdown in some mail service as rails cut down passenger runs.

Railroads . . . Undercutting Truck Rates

Railroad proposals to cut short haul rates on gasoline and light oil in five western states have been turned down by ICC. Reason: Proposed rates would undercut tank-truck rates. However, ICC told the railroads they could submit application to cut rates as much as 1½¢ per cwt below truck rates for hauls of more than 75 miles if they desired.

Livestock Trucking . . . Reduce Damage

Agriculture Department is running test projects with an idea of helping truckers cut down damage and losses to livestock between farm and market. More than 90 per cent move by truck and annual losses are estimated as in excess of \$50 million, largely through improper handling while loading, in transit, and at the market. Tests are being run on asphalt carpeting for better footing, and on partitioning techniques to prevent crowding and overloading of vehicles.

Flammable Fabrics . . . Stopped

New legislation, effective next June, makes it unlawful not only to make and sell but to transport any highly flammable wearing apparel or fabrics in interstate commerce. Penalty is a fine of up to \$5,000, a year in jail, or both. But carriers can protect themselves by requiring a statement from the shipper to the effect that any suspect goods have been given a reasonable test to prove they meet legal standard to be set up.

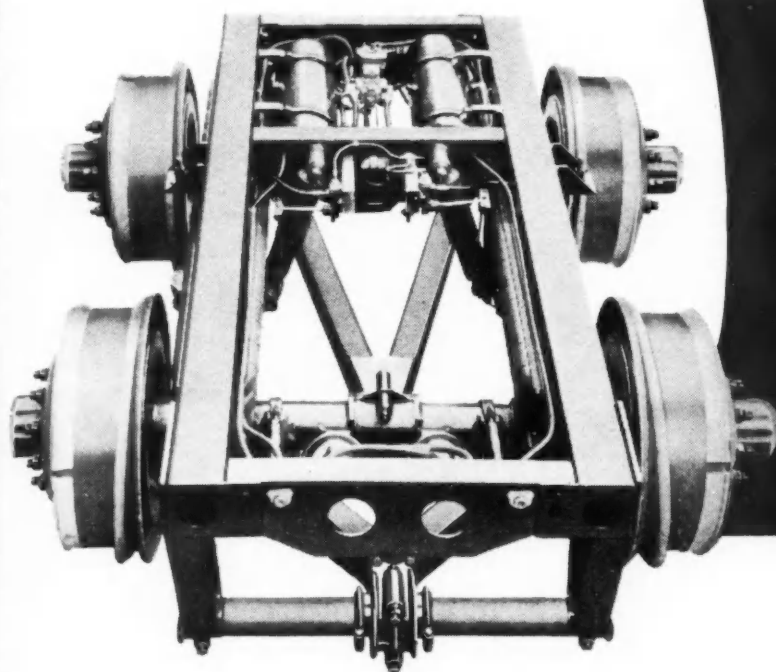
Vehicle Makers . . . Advise Commerce Dept.

Creation of a motor vehicle division within the Commerce Department's new Business Services Administration was virtually assured after manufacturers of both passenger cars and trucks met with Commerce officials. The division will be headed by an industry official, who will serve on a rotation basis and have a Commerce expert as chief deputy. Industry advisory committees are to be continued much the same as under NPA. The Automobile Manufacturers Assn. is to act and speak for the industry on most matters between advisory committee meetings.

Priority Powers . . . Continued

Emergency priority powers over transportation will be continued for duration of the emergency and six months unless Congress should decide to wipe them out before the White House declares the emergency ended. This was decided by continuing resolution which became law June 30. Congress has also extended powers of the government to inspect facilities holding defense contracts, to see company books, and to look at other pertinent records.

***Now!* General Air Spring on a Proven Suspension**



***Trucktor*
Air Ride
TANDEM**

**BEFORE YOU BUY the new, soft ride...
INVESTIGATE the whole suspension:**

Is it thoroughly road-tested?

Does it use the air spring safely?

Does it have a proven design?

What is its maintenance record?

Here are the facts on Trucktor's *Air Ride*:

Road-tested one year, 40,000 miles by a major oil company. No maintenance required. Company has placed large re-order. Orders also placed by several other major oil companies.

Air Spring used as cushion only. Rubber-mounted yokes take all brake reaction—tow the axles. No axle hopping, no chance of air spring changing position. Design proven by 25 years' successful use.

An air spring alone doesn't make a good tandem suspension.

Investigate . . . and you'll specify Trucktor Air Ride.

See your Trucktor Distributor, or write direct.

THE TRUCKTOR CORPORATION

Route 22

Mountainside, N. J.

DETROIT DISPATCH

by LEN WESTRATE Detroit News Editor

Muffler Noise . . . Unsettled

Apparently the next step in the muffler noise program will be taken by the ATA Committee which will ask state motor vehicle administrators to help establish a noise standard. The Committee told an administrator's engineering committee in Detroit recently that instrumentation is commercially available to test mufflers on new equipment at the factory to determine whether it meets specifications that would be agreed upon. Truck manufacturers dissented, favored development of a three-band sound meter built to SAE specifications and asked that further muffler legislation be deferred until proper instrumentation and standards can be established.

Power Steering . . . In Production

Bendix Products Division of Bendix Aviation Corp. has a production order from one truck manufacturer for its new linkage type power steering unit. Announcement will be made by the truck builder before too long. For a description of the unit, see page 174 this issue.

New Rayon Fiber . . . Longer Tire Life

Cooler running and longer-lived tires for trucks may evolve from a new type rayon fiber developed by du Pont. The company says the new rayon is 20 per cent stronger, has greater fatigue resistance than current types, and in tests has given twice the tire life obtained with ordinary rayon.

Reo Buys . . . Former Autocar Branch

Reo has bought the former Autocar branch at Worcester, Mass. In addition to its own Reo activities the Worcester operation will service Autocar trucks and will handle all Autocar parts in its territory. It will operate as a sub-branch of the Boston branch.

Tractor Design . . . Changes Asked

Operators at the Common Carriers Conference recently came up with a few more suggestions for truck manufacturers. They would like a tractor for use with any kind of 35 ft trailer, even square nosed jobs, that will give 4 in. interference clearance and still stay within the 45 ft overall limit.

A. E. Williams, chief engineer for Fruehauf, says the industry needs a 96 in. bumper-to-back-of-cab tractor for complete trailer interchangeability and that one manufacturer is working on it. Operators also want SAE standardization of 48 in. from ground to the

top of the fifth wheel with maximum tolerance of 1 in., and more standardization of flywheel housings.

A Radiator . . . With Aluminum Fins

Still in the experimental stage, aluminum radiator fins are proving successful in tests conducted by McCord Corp. The test units have conventional brass tube and header sheet construction, with aluminum fins attached by soldering. Key to the project's success is a McCord-developed proprietary flux and a high zinc solder containing tin. The flux, in effect, provides an alloy bond between the two dissimilar metals. There is no acid residue with this process and no need for pickling and cleaning other than a water rinse.

General Motors . . . In Ring Business

From now on Detroit Diesel Engine Div. "71" Series engines will be fitted with hard-chrome-faced steel compression rings, supplied by Diesel Equipment Div., General Motors Corp., putting GM in the piston ring business for the first time. They will be used exclusively in production and service on Series 71 diesel engines, including service on all previous models. They are produced from carbon steel spring wire rolled into rectangular cross-section, heat set, ground, and given a heavy coating of hard chromium plate. During rolling the face of the ring has two oil grooves rolled in.

Manual Shift . . . or Hydra-Matic

Army Ordnance has a tough decision to make between GMC and Reo under its announced policy of limiting military production to one supplier. The 2½ ton 6x6 trucks being built by both companies are notably different designs. Reo has a manually shifted transmission and the Gold Comet engine, whereas the GMC job is equipped with Hydra-Matic drive and 302 GMC engine. Consequently not only will price have to be considered but the Army will have to make a decision in favor of one design or the other.

Military Truck . . . to Civilian Model

Reo will announce soon a civilian type 6x6 truck very similar to the military vehicle it now is building. It will carry the 160 hp Gold Comet engine and the frame and some other chassis parts will be beefed up a bit more than current military jobs. It is intended primarily for heavy off-the-road operations, such as in oil fields, lumbering, and quarry work.

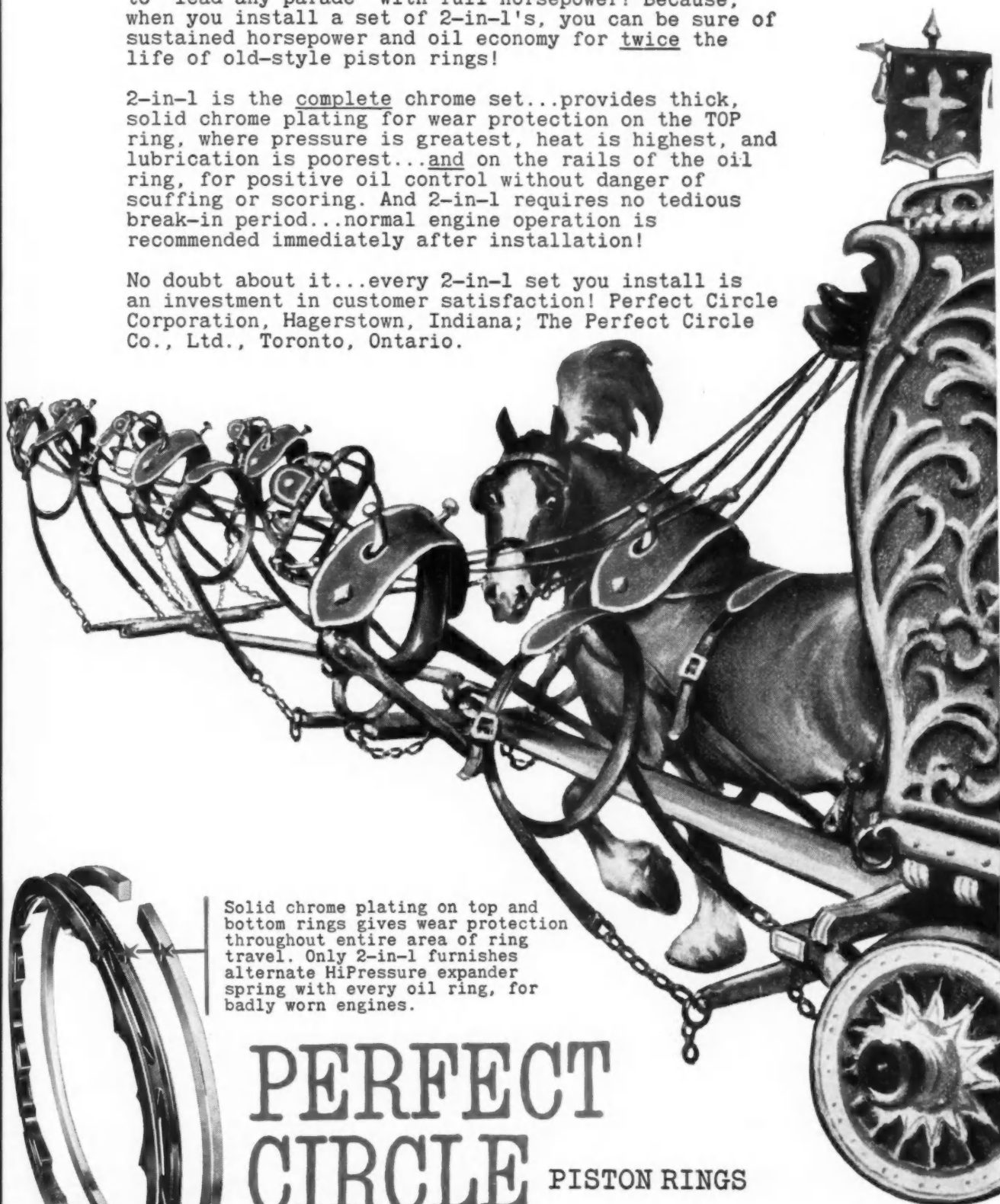
RESTORE LOST HORSEPOWER...

with Perfect Circle 2 in 1 chrome piston rings!

You can depend on Perfect Circle 2-in-1 Chrome Rings to "lead any parade" with full horsepower! Because, when you install a set of 2-in-1's, you can be sure of sustained horsepower and oil economy for twice the life of old-style piston rings!

2-in-1 is the complete chrome set...provides thick, solid chrome plating for wear protection on the TOP ring, where pressure is greatest, heat is highest, and lubrication is poorest...and on the rails of the oil ring, for positive oil control without danger of scuffing or scoring. And 2-in-1 requires no tedious break-in period...normal engine operation is recommended immediately after installation!

No doubt about it...every 2-in-1 set you install is an investment in customer satisfaction! Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto, Ontario.



Solid chrome plating on top and bottom rings gives wear protection throughout entire area of ring travel. Only 2-in-1 furnishes alternate HiPressure expander spring with every oil ring, for badly worn engines.

PERFECT CIRCLE PISTON RINGS

The standard of comparison

AUGUST ROUNDUP

by **ERNIE FOREST** Assistant Editor

ICC . . . Changes Made

Interstate Commerce Commissioner J. Monroe Johnson, serving his thirteenth year as an ICC member, was recently elected Commission chairman for the year ending June 30, 1954. This is the second time for Johnson as he served as chairman for the calendar year 1950.

Other Commission changes include the retirement of Commissioner William J. Patterson, after 40 years with the ICC—14 of them as a Commissioner, and Commissioner William E. Lee, who has a record of 23 years with the ICC. Replacing Lee will be Howard G. Freas, a rate expert from the California Public Utilities Commission. Owen D. Clarke, Yakima, Wash., was confirmed by the Senate to replace Patterson. Commissioner Walter M. W. Splawn has announced his retirement, having been a Commissioner for 19 years. No appointment has been made as yet to fill the vacancy.

Highway Contest . . . Moses Wins

New York City Commissioner of Parks Robert Moses was named winner of the \$25,000 first prize in General Motor's nation-wide essay contest on "How to plan and pay for the safe and adequate highways we need." Second place winner, \$10,000, was Brigadier General Lacey V. Murrow, on inactive duty, currently Executive Director of Competitive Transportation Research, Assn. of American Railroads. At press time General Motors has not indicated what it was going to do with the over 40,000 essays submitted in the contest.

PMTA Suit . . . Not Dismissed

Pennsylvania Motor Truck Assn.'s suit against 30 northeastern railroads will proceed on schedule when the taking of depositions begins again next month. Ruled a federal district court: there is no basis to dismiss the suit. Both the railroads and the public relations firm of Carl Byoir and Associates had asked that the case be thrown out.

But . . . No Weight Increase

Meanwhile two efforts to increase Pennsylvania's truck weight limits were detoured. The PMTA sponsored HB 1390, which was based on an axle-spacing formula to permit gross weights more in line with surrounding states, was voted down in the House without reaching the State's Senate.

Soon after a new bill, SB 804, providing for 60,000

lb GVW on a single-axle tractor, tandem-axle semi-trailer combination, was introduced. However, at press time, word was received that the State Senate Committee on Highways had voted 17 to 7 to keep the bill in committee. Observers noted that this probably killed its chances of being enacted.

SB 804, said to have been introduced "by request" of 13 steel companies and many oil, manufacturing and wholesale companies in the state, was reported to have approval of Pennsylvania's Dept. of Highways. Other provisions of SB 804 included (1) a 32,000 lb limit on tandem axles (as compared with the state's present limit of 36,000 lb), (2) between 25 and 30 per cent increases in registration fees and (3) drastic penalties for exceeding wheel, axle or gross weight limits.

Truck Freight . . . Increased

Intercity truck tonnage for the first quarter of this year was 10.4 per cent higher than for the same period last year according to figures released by the American Trucking Assns. The ATA's index, which is based on 1941 as 100, stood at 283 for the first three months of this year, a new record. Previous high was 269 in the first quarter of 1951. In the same period last year it stood at 256.

Interesting fact was that all nine regions showed a gain with both common and contract carriers registering increases. Biggest gain was 14.6 per cent obtained by the Central and Rocky Mountain regions. Motor vehicle carriers showed a 33.1 per cent increase to lead the commodity groups.

Tractors . . . Streamline

Truck designers normally do not pay any great attention to streamlining but are concerned more with functional design. However, Fruehauf reports that its tests show many tractors kick up quite a turbulence from wind resistance, reducing the effectiveness of streamlining the nose of the trailer. The company adds that some truck builders now are designing more streamlined tractors.

Accidents . . . Down and Up

National Safety Council's 1953 edition of *Accident Facts* shows that trucks were involved in 13 per cent of traffic accidents in 1952 as compared with 14 per cent for 1951. Offsetting this was a report from the Interstate Commerce Commission for the first two

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COMMERCIAL

MULTI-STOP LEADER FOR 15 STRAIGHT YEARS



The performance of International Trucks with Metro® bodies is unmatched. They're designed for multi-stop service. Owners' cost records have made them multi-stop sales leader for 15 years.

You get more payload space on shorter, more maneuverable chassis. *You save time* in traffic and on delivery routes. *You save space* at loading dock and in the garage. You have a choice of 4 body lengths.

You profit from features that *save driver time and energy*. Full 6-foot headroom and low stepwell speed loading and unloading. Broadleaf springs and new shock absorbers provide maximum driver comfort.

Compare all-truck construction that gives you unmatched chassis stamina, engine power, and operating economy. *Compare* the long life and low maintenance cost of the all-steel Metro body. It's the multi-stop body that outlasts them all.

See your International Dealer or Branch today

NEW INTERNATIONALS WITH NEW METRO BODIES

**Compare them with any other
multi-stop truck on the market!**

More Payload Space. Eight body sizes, two body styles—standard or flatback. Four body lengths—7¾, 9½, 10½, and 12-foot; each has increased capacity. New capacities range from 243 to 392 cubic feet.

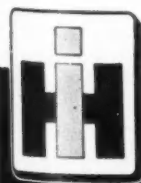
New Driver Convenience. New full 6-foot headroom. Low stepwells. Sliding front doors standard, folding doors optional. Six rear door options.

New Driver Comfort. New broadleaf springs. New shock absorbers. Lower center of gravity. New toe-board angle.

New Savings. New downdraft carburetion for greater fuel economy. New cushioned disc clutch for longer life, smoother operation.

Six chassis models, 102, 115, 122, and 134-inch wheelbases. GVW ratings, 5,400 to 10,000 lbs.

INTERNATIONAL HARVESTER COMPANY • CHICAGO



International Harvester Builds McCormick Farm Equipment and Farmall Tractors... Motor Trucks... Industrial Power... Refrigerators and Freezers

Better roads mean a better America

INTERNATIONAL TRUCKS

"Standard of the Highway"

A Fleetman's Guide to ICC LEASING REGULATION

Long-postponed and much discussed, new rules go into effect Sept. 1. Here is a simplified summary of the regulations with ICC interpretations and comments

After some five years of discussion and more than two years of official hearings and court actions, ICC regulations concerning lease and interchange of vehicles are scheduled to go into effect September 1. Since first published on May 8, 1951, the regulations have undergone several changes through amendments, orders and interpretations issued by the Commission.

The original regulations, plus subsequent amendments, make for heavy, sometimes confusing, reading. Hence, **COMMERCIAL CAR JOURNAL**, in cooperation with Director W. Y. Blanning of the ICC's Bureau of Motor Carriers, presents the following study of the rules as they now stand along with some informal interpretations.

In addition, CCJ is preparing a mimeographed copy of the complete regulations, which will be revised to Aug. 10, 1953. It is available to readers without cost. Address your request to the Editor, **Commercial Car Journal**, Chestnut & 56th Sts., Philadelphia 39, Pa.

AS THIS issue goes to press, interested parties across the nation were waiting to see whether the U. S. Senate would pass the bill, overwhelmingly approved by the House, which would prohibit the ICC from regulating less-than-30-day trip-leasing. Before final proofs are OKayed we hope to have definite word. But regardless of Congressional action there remain important provisions still scheduled to go into effect

on Sept. 1. Of course, there is always the possibility of further postponement, but at press time ICC spokesmen did not envision any great likelihood of this possibility. Some rather minor revisions might be forthcoming.

The original intent of the rules was to eliminate objectionable operating practices by requiring that carriers using leased or interchange equipment assume the same control and responsi-

bility for such equipment as they are now required to observe for their own vehicles and drivers. Admittedly, the ICC was particularly aiming at combatting objectionable practices by "owner-operators" or "gypsy" truckers.

In broadest terms, the new rules specify minimum mechanical safety equipment and identification requirements for leased and interchanged equipment, require that drivers of such equipment meet the same qualifications as do the carrier's regular employees, and regulate the form, term and conditions of lease and interchange agreements. Responsibility for meeting these requirements is placed on the carrier using the equipment.

Contrary to general opinion the Bill before congress concerns only the duration of the lease, i.e., prohibits the ICC from specifying that the lease "may not be for less than 30 days." True the bill also prohibits the ICC from regulating the *amount* of payment to lessees, but ICC has served notice that it does not accept this as prohibiting it from regulating the *method of payment*, i.e., "may not be computed on the basis of any division of percentage of applicable rate. . . ."

Since those exempt from the rules will want this information promptly, the specific exemptions provide a logical starting point for this discussion. These are followed by reviews of the provisions covering the leasing of equipment between common carriers, and the rental of equipment for all other purposes. The rules apply only to "authorized carriers"—defined by the ICC as "a person or persons authorized to engage in the transportation of property as a common or contract carrier under the provisions of Sections 206, 207, or 209 of the Interstate Commerce Act."

Exemptions

WITH the exception of the rules relating to inspection and identification of equipment (Page 152) and the rental of equipment to private carriers or shippers (Page 156) exemptions are provided for:

1. Equipment leased by one authorized carrier to another when: (a) The

lease is between operating bet routes they are (b) The lease route carriers and within term authorized to serve

Petitions to now under commission. In ge change the rule tion between route authoriz seek to have t the requirement operated betw the routes or v both the lessor ized to serve.

action the C when it's decis 2. Equipme way express motor-for-rail stations.

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CONDITIO ized car which they thorized tra

Vehicle to be leased must be inspected by carrier, using form similar to this, to be sure it meets requirements of sections 193 and 196 of ICC Safety Rules

REPORT OF VEHICLE INSPECTION

Description of vehicle: Make _____ Year _____ Model _____
 Serial No. _____
 Type: Tractor _____ Trailer _____ Semitrailer _____
 License plate: No. _____ State _____
 Owner's name _____
 Name of authorized carrier _____
 Indicate in the proper column the result of the inspection of each item listed:

| Item | Not defective | Defective | Description of defect |
|-------------------------------------|---------------|-----------|-----------------------|
| Body brakes | | | |
| Cooling system | | | |
| Drive line | | | |
| Emergency equipment | | | |
| Engine | | | |
| Exhaust | | | |
| Fuel system | | | |
| Glass | | | |
| Horn | | | |
| Leaks | | | |
| Lights (state which) | | | |
| Reflectors | | | |
| Speedometer | | | |
| Springs | | | |
| Steering | | | |
| Tires | | | |
| Wheels | | | |
| Windshield wiper | | | |
| Any other items requiring attention | | | |

I hereby certify that on the _____ day of _____, I carefully inspected the equipment described above and that this is a true and correct report of the result of such inspection.

(Signature of person making inspection)

I hereby certify that on the date stated above the person who made the inspection covered by this report was competent and qualified to make such inspection and was duly authorized to make such inspection as a representative of

(Name of authorized carrier)

Date _____

(Signature of authorized carrier or copartner or officer of authorized carrier)

lease is between regular route carriers operating between points and over routes they are both authorized to serve. (b) The lease is between irregular route carriers operating between points and within territory they are both authorized to serve.

Petitions to modify this section are now under consideration by the Commission. In general the petitions seek to change the rule so as to remove the distinction between regular and irregular route authorized carriers. They also seek to have the Commission eliminate the requirement that leased vehicles be operated between the points and over the routes or within the territory which both the lessor and lessee are authorized to serve. It is not now known what action the Commission will take or when its decision will be announced.

2. Equipment used to transport railway express traffic or in substituted motor-for-rail service between railroad stations.

3. Equipment used solely within municipalities or commercial zones.

4. Equipment used for transportation performed pursuant to a plan approved by the ICC in a Section 5 hearing. (Note: This means that a carrier must have his particular plan approved by the ICC. At the moment it applies only to one large household goods carrier. Another application is pending.)

5. The lease of equipment without drivers by an authorized carrier from an individual or company whose principal business is leasing equipment without drivers for compensation.

6. Equipment other than a power unit provided that it is not drawn by a power unit leased from the lessor of such equipment.

For authorized household goods carriers, the effective date of all regulations except those concerning vehicle inspection and identification and the safety qualification of drivers has been postponed until July 1, 1954.

Augmenting Equipment

CONDITIONS under which authorized carriers may use equipment which they do not own to perform authorized transportation are set forth in

the regulations and are specifically distinguished from the regulations governing the interchange of equipment by common carriers. It should be noted that these regulations apply to equipment in use and covered by a lease dated prior to the effective date of the regulations.

The following is a condensation of the regulations affecting the augmentation of equipment:

The contract, lease, or other arrangement must be made between the authorized carrier and the owner of the equipment. It must be in writing and must be signed by the carrier and the owner of the equipment or their authorized representatives. No set form is required by the Commission, but the lease must meet the conditions set out in the rules.

The period of the arrangement must be specified in the contract and may not be for less than 30 days if the equipment is to be operated for the carrier by the owner of the equipment or his employee.

(The following exemption is provided. For a period of six months from the date these rules become effective, equipment specified in section 203 (b) (6) of the ICC Act may be used by

authorized carriers under contracts, leases or other arrangements of less than 30 days duration.

To comply with this exemption, however, this equipment must be returning over reasonably direct routes from the destination of shipments of commodities specified under Section 203 (b) (6) of the act or its commercial zone or from intermediate points or their commercial zones, to the origin of the shipment or intermediate points or their commercial zones.

After the six-month period referred to above, a carrier may lease a motor vehicle owned by a producer or grower of agricultural commodities or of livestock for any period, provided the following conditions are met:

The owner of the vehicle must use it for transporting his agricultural commodities or livestock to market.

The carrier must use the vehicle for transportation authorized in his certificate or permit on the return of the vehicle to a point in the state from which the agricultural commodity or livestock shipment originated.

The carrier, at the time of the lease, must receive a statement signed by the (TURN TO PAGE 151, PLEASE)

COOL SHOP IN THE SUN



Distinctive roof design with windows facing north cuts glare, eliminates columns. Windows open for maximum ventilation

Miami's new municipal shop obtains maximum ventilation and sunlight without glare. It has several new design features

WHEN facilities at our municipal garage proved to be inadequate for the proper servicing of the city's fleet of heavy trucks, garbage-collecting equipment and mobile road building units it was decided that an expansion program was needed. This program was recently completed with the construction of a large, well lit, main

garage building and addition of other modern facilities.

In addition to the fact that the new buildings add more than 17,000 square feet to our service facilities, including a welding room, parts and paint storage space, we feel that the project may be of interest to other fleetmen because of several innova-

tions in its structural details and facilities and its relatively low construction cost.

A feature of the new main garage building is its natural lighting system. The roof framing system is a combination of Vierendeel trusses and ribbed vaults, or in other words, of quarter-barrel and sawtooth design.

The space bet
Vierendeel trus
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The roof is
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COMMERCIAL C



By W. K. McNamara

Municipal Garage Superintendent
City of Miami, Flo.

Fluorescent lamps supplement sunlight, doors open to expand work area. Typical fleet units are shown

Rear view shows pump island with small office, open rear doors, and link between new and old shop at extreme left now used as welding shop

The space between the struts of the Vierendeel truss accommodates chain operated windows. This system provides an overall unobstructed floor area approximately 191 ft long and 65 ft wide. The characteristics of the structure, plus the interior color scheme provide a daylight lighting level at the floor of over 100 foot candles.

The roof is curved on an interior radius of 22 ft and consists of 4 in. reinforced concrete covered with cold process asphalt roofing with pressure applied rice rock. This design is ideal for ventilation and natural illumination. The skylight in the sawtooth on the north provides light without glare, which is evenly distributed throughout the entire floor area by reflection from the curved ceiling of each bay. The upper row of windows swings outward on a horizontal axis providing ventilation at the highest points of the ceiling.

Concrete Construction

THE building is of fireproof and hurricane-proof reinforced concrete construction, erected on piles sunk into a reclaimed rock pit. The piles are 10 in. by 12 in. by 20 ft long, grouped together to form pile caps which support continuous grade beams designed to carry the structure.

Miami's moderate year-round climate permits open air facilities and operations. Consequently, continuous rolling steel doors were installed

(TURN TO PAGE 162, PLEASE)



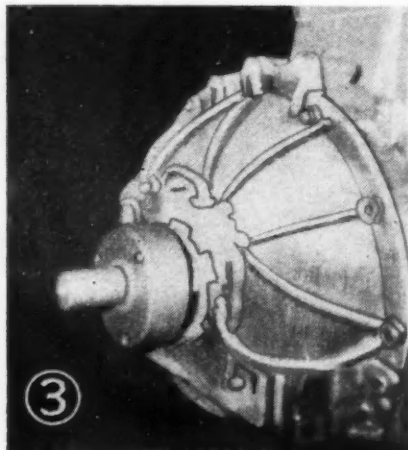
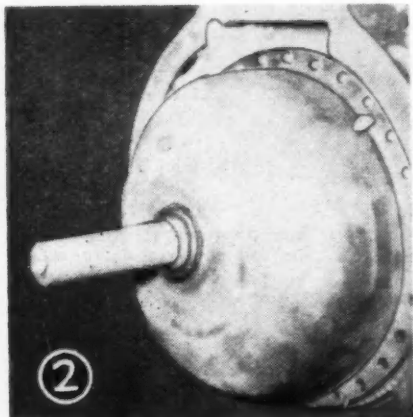
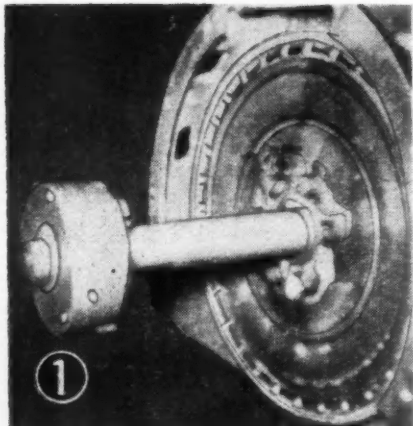
A dynamometer is installed in one of the four new pits which feature explosion-proof lamps in pit walls. Author W. K. McNamara is at extreme left.



Shop Built Equipment Lightens Bus

From the Shops of Pensacola Transit, Inc., Pensacola, Fla.

Transmission Alignment Jig



AFTER experiencing considerable difficulty in checking and securing proper alignment of the flywheel cover in relation to the flywheel center on our GM TGH 3101 coach which uses the 270 engine and the hydramatic transmission, we machined the shaft illustrated. Using this shaft and a 3-jaw self aligning lathe chuck has simplified and assured proper alignment of the hydramatic transmission in relation to the flywheel center. This has resulted in greatly increasing our seal life (front transmission oil seal), saving us many dollars in manpower and time. Specifications of the shaft are shown on the chart below.

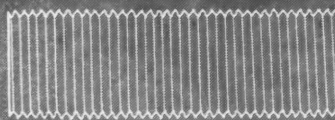
To use: After checking the flywheel runout and correcting any misalignment, the torus cover is bolted to the flywheel and its runout checked and

corrected according to the instructions in the maintenance manual. Then the shaft is pushed through the center of the torus cover so that the small end of the shaft fits into the flywheel pilot bearing. The dowels on the rear half of the flywheel cover are removed and the cover is lightly bolted in place. The lathe chuck is screwed onto the alignment shaft so that the jaws contact the circular hole in the flywheel cover. The self-aligning jaws are tightened (expanded) so that the flywheel cover is moved into perfect alignment. Dowel holes in the cover are drilled to receive oversize dowels to hold this alignment.

Shafts made to proper specifications can be used to align any installation of the hydramatic transmission.

5-IN. MACHINED AND
THREADED TO FIT
SELF ALIGNING
LATHE CHUCK

1/2-IN. MACHINED TO .590
- FITS INTO FLY WHEEL
PILOT
BEARING



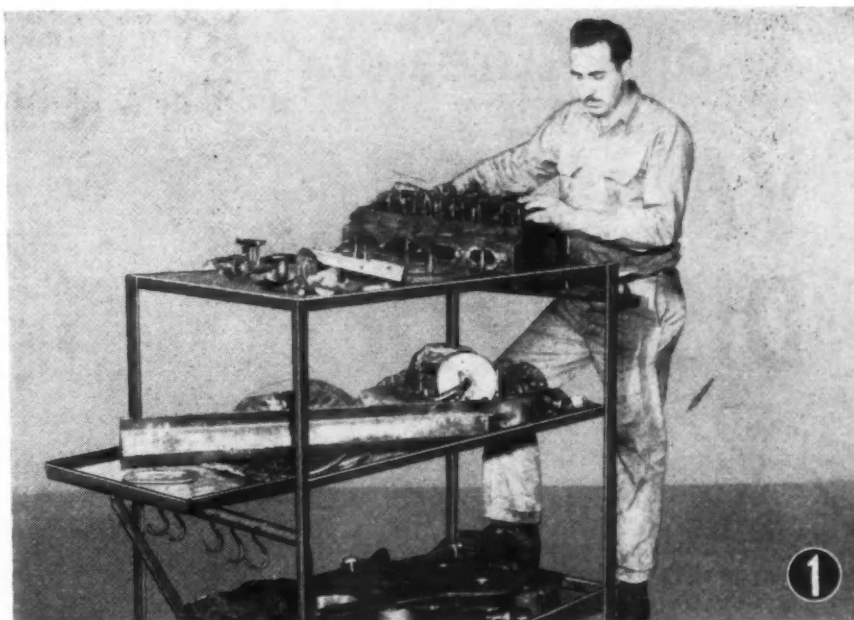
SHAFT IS MACHINED TO 1.827 IN.
TO FIT CENTER HOLE IN TORUS COVER

Bus Maintenance

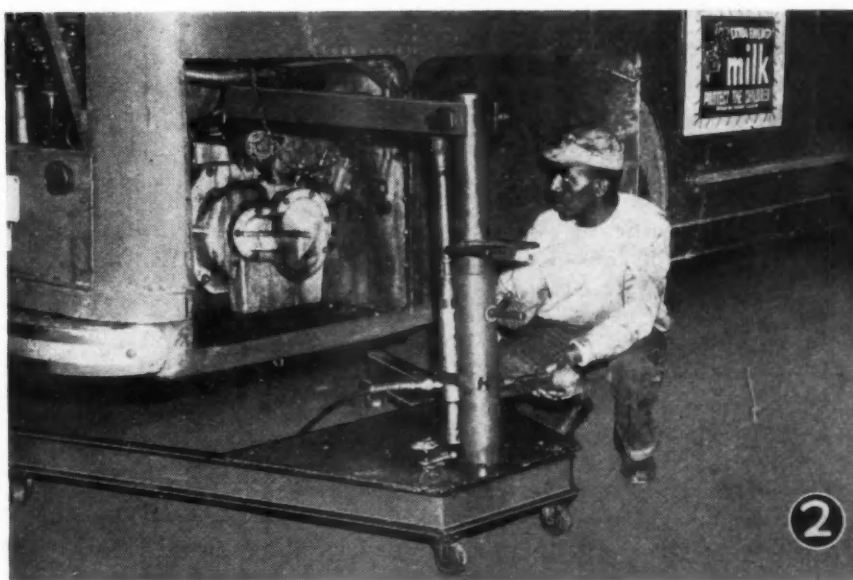
Two bus fleet shops provide
some tips for making heavy
work easier, saving time

From the Shops of Lake Shore Coach Lines, Inc., Detroit—By Roy Wilson

Rollaway Steam Table



Engine Hoist



WHEN engines and other parts are disassembled for repair in our shop, they must first be steamcleaned. To make their transportation to the steamcleaner easy and also to keep parts together so they will not become displaced, all parts are placed on this three-tiered shop-built rollaway table, Fig. 1 at right, and are then wheeled to the steamcleaner. After cleaning they return to the repair department on the same table. The table is equipped with casters. It is not necessary to remove parts from the table to steamclean unless desirable. Each tier of the table has a heavy wire-mesh base which permits the water to drip through to the floor. When extra strength is needed for the support of extra heavy parts, the wire mesh is covered with a removable sheet of aluminum. A rod with holes bored into it at intervals runs from one leg to the other at one end of the table underneath the second tier. Hooks are attached into these holes from which may be suspended many different types of smaller parts to be steamcleaned.

THIS hoist, Fig. 2 at right, makes the removal of engines and transmissions in rear engined coaches comparatively easy. To remove transmissions, the clutch air cylinder and cylinder bracket are removed and the home-made hoist hook engages the heavy eye screwed into a heavy steel plate which is bolted to the transmission housing. Then the hoist is operated.

To remove engines and hydraulic supply tank the valve housing is re-

(TURN TO PAGE 128, PLEASE)

If you're having valve trouble, check over these suggestions. Here are procedures that will pay dividends in longer valve life

Some Causes and Cures of VALVE SEAT DISTORTION

VALVE manufacturers are continuously working with the engine manufacturers in efforts to improve valve life. Up to a few years ago the improvements in valve life were obtained by adding extra cost into the valve itself, either by the use of improved materials or by the application of face and/or head coatings, as well as the use of sodium cooled valves in the extremely heavy-duty operations.

With the advent of valve rotation, valve durability has been prolonged to the point where other conditions are becoming evident which were heretofore clouded by short valve life. Reference is made particularly to valve seat distortion, which is defined as the distortion taking place at the valve seating surface in the cylinder head. Valve seat distortion can be either of two types—thermal or mechanical. Either type has the same end result but being able to differentiate between the two is extremely difficult.

Inspection of the cylinder head after operation will generally show the effects of valve seat distortion. The valve seat will show burnished

areas on some portions of the seating surface, other areas are dull due to the accumulation of deposits. Under certain conditions the areas of seating and leakage may be localized. Laboratory tests have indicated that distortion has a pronounced effect on valve temperatures (Fig. 1). Whenever a localized area of leakage is present, valve burning is frequently encountered (Fig. 2). In the case of faced valves, distortion of the seat causes aggravated thermal stresses in the valve, causing cracking of the valve face and severe guttering behind the hard-faced surface.

With faced valves, there are no instances where failure of the base material takes place unless a crack has occurred in the hard facing, and these cracks are frequently due to thermal distortion of the valve seat. In addition to the aggravation of con-

ditions which lead to valve burning, seat distortion produces in the valve high mechanical stresses in the under head section and these, if allowed to continue for prolonged periods, lead to the nemesis of engine operation—broken valves (Fig. 3).

The effects of valve seat distortion may also appear as a pounded valve face. A valve which normally operates with a low unit seating pressure on a uniform valve seat shows a pounded condition, if allowed to operate on a valve seat where considerable distortion takes place. The unit seating pressure varies inversely with the amount of valve seat distortion present in an engine (Fig. 4).

Another valve difficulty which is making its appearance recently is underhead erosion. This is frequently misconstrued and called "stretching." Laboratory data compiled on valves

which have shown that no stretching occurs but necking does still present to the mechanics of the engine are not entirely known that it is the portions on valve seat distortion on distorted valve face may cause trouble may be corrosion or pitting of the valve. This type of erosion is the same diameter under the head with the valve seat. This substantiates the explanation of this condition. Valve insertion cracking are

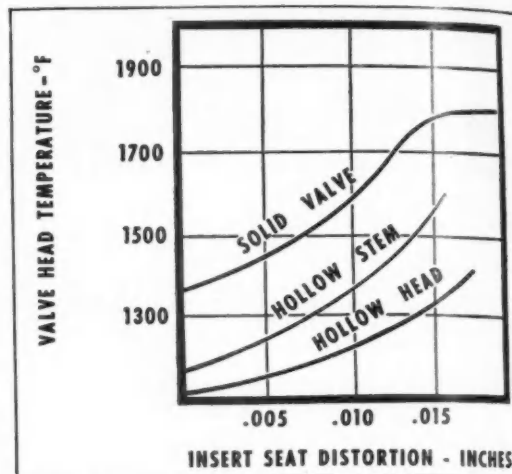
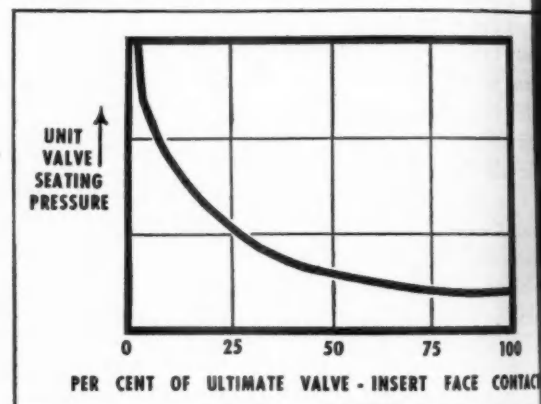
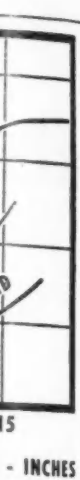


Fig. 1. Effect of seat distortion on valve head temperature. Hollow valves are more heat resistant.

Fig. 4. Effect of insert seat distortion on valve seating pressure. High unit pressure accelerates failure.





valve head
heat resist
on valve seat
erates failure

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FACE CONTACT

valve burning which have shown this condition indi-
cating that no stretch has taken place,
in the underhead section but necking down under the head is
still present to a large degree. The
mechanics of this type of valve failure
are not entirely understood. It is
known that it occurs in greater pro-
portions on valves which have been
undistorted on distorted valve seats. This type
of trouble may be considered as ero-
sion or corrosion caused by the im-
pact of the hot gases at high
velocities on the underhead section
of the valve. In most instances where
this type of erosion is seen, the mini-
mum diameter of the valve stem
under the head occurs directly in line
with the valve face angle. This further
substantiates the erosion theory as
explaining this underhead attack con-
dition.
Valve insert and cylinder head
cracking are common failures in the

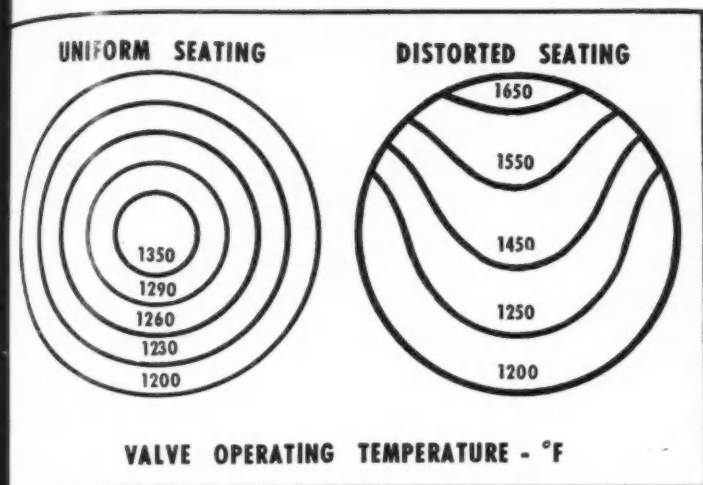


Fig. 2. Comparison of valve head temperatures. Poor seating permits high temperature build-up and early valve head failures

Fig. 5. Typical cylinder head cracking, left, and insert cracking, right, occurring with poor seating conditions

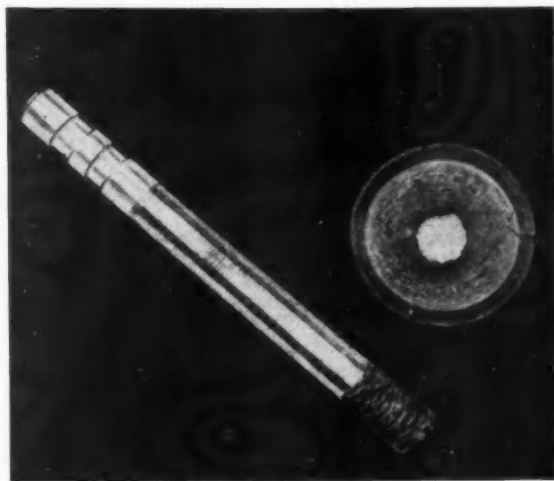
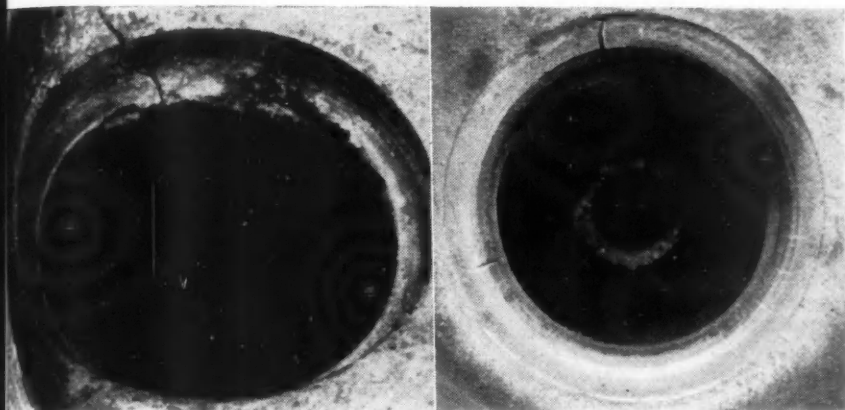
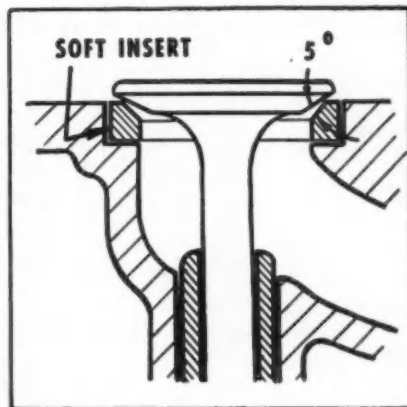


Fig. 3. Broken exhaust valve. Erosion at the neck and breakage occurs with poor seating

Fig. 6. An interference angle of 5 deg. will reduce heat and up valve life



By John A. Newton and
M. J. Tauschek*
Thompson Products, Inc.

field. Cylinder heads are made from alloyed cast irons. Both of these materials lack hot strength and ductility and are very sensitive to thermal shock. These materials, in spite of their much lower temperature of operation in the valve, are prone to crack under certain conditions in heavy duty operations (Fig. 5). In passenger car service and light truck operations, the alloyed cast iron inserts have given a remarkably good account of themselves.

* Excerpted from a paper presented at SAE National Passenger Car, Body & Materials meeting.

These, then, are the results of valve seat distortion and are the reasons why the engine manufacturer should not treat this subject lightly, as its correction will pay big dividends in increased valve durability.

Maintenance Procedures

WHILE a certain amount of valve seat distortion in engines is a result of design considerations, additional distortion of the valve seat is created as a result of improper maintenance procedures. It is within the realm of every repairman to observe the effects of valve seat distortion, to investigate his shop practices and to take whatever steps are necessary to keep the seat distortion to a minimum. Failure to adequately maintain the engine cooling system is very common and is often responsible for

(TURN TO PAGE 168, PLEASE)



How much is that salesman

MILE

Company owned or salesman owned, car fleet costs are up with companies trying new plan

By Blaine S. Britton, Editor, Sales Service, The Dartnell Corp.

These trends are apparent . . .

1. It has been generally necessary to increase allowances for salesman-owned cars.
2. Companies which own their fleet are tightening up on fleet costs to hold sales costs down.
3. Many companies are investigating "experience rating" insurance, looking for premium reductions.
4. Interest grows in leased fleets provided fleet management and other services are included.
5. Salesmen who buy new cars at present prices are likely to get more company aid than before.

ALLOWANCES to salesmen who drive their own cars are, on the average, up approximately $\frac{1}{2}$ cent per mile compared with average of 6.4 cents per mile reported in our 1950 survey. It now costs as much as 3 cents per mile more for salesman-owned cars than for a company-owned fleet, even when administrative and all overhead charges are included. Company-owned fleet costs

are also up, although not proportionately so.

As allowances to salesmen for the use of their own cars grow, the cost spread between company-owned and salesman-owned vehicles also grows, causing some companies to favor owning their own fleet.

Changes were made in the method of ownership by 19 of 124 companies checked. Of these companies, 13

changed from either salesman or company ownership to leasing. However, fewer than 1000 of the 25,000 cars covered in the 1952 survey are actually under lease.

Allowances to salesmen for the use of their cars ranged from 5 to 10 cents per mile, with the average mileage reported at 19,260 miles, and average allowance at 7 cents per mile. In quite a number of cases where there is metropolitan driving an additional 1 to 3 cents is added to the normal allowances.

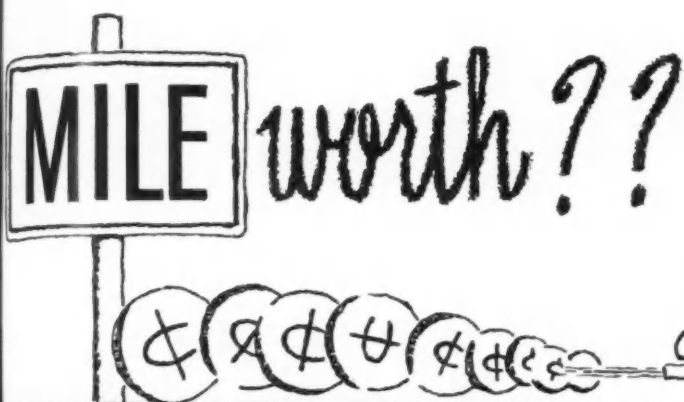
In evaluating the "average" allowance mentioned above it is important to remember that in each company there are many factors involved in establishing the allowance, not the least of which is the relationship between the sales force and the company. It is thus very difficult to arrive at an "average" figure which is not misleading.

There appears to be a tendency to get away from a flat mileage allowance. Replacing this is the sliding scale method in which a decreasing allowance rate is made as the miles per month increase.

Here are several approaches to this question based on experience reports furnished by the fleets:

1. With mileage for a fleet of some 650 cars averaging 14,000 miles per

year, an insurance cost of 8 cents for 1000 miles, 7 cents for 2000 miles, 5 cents for 3000 miles, 4 cents for 4000 miles, 3 cents for 5000 miles, 2 cents for 6000 miles, 1 cent for 7000 miles, and 0.5 cent for 8000 miles. A bank will loan 500 miles per year on the basis of operating costs. The fixed costs. The percentage is decided by the car. 3. An automobile manufacturer pays 10 percent of the cost of the car at the time of sale, with a maximum allowance of 30 percent. It is found that when cars are leased for 24 months, the factory delivers them at a price of \$2,000, including taxes, etc., and covers, on net. 4. With a company-owned car, a developed system of allowing the allowance for individual salesmen, views of conditions are made, and revised either to conditions.



ies trying new plans to meet them

salesman of year, an insurance company pays:
 8 cents for the first 6,000 miles.
 7 cents for the next 6,000 miles.
 5 cents for the next 12,000 miles.
 4 cents per miles for any over 24,000 miles in one calendar year.
 2. A bank whose cars average 10,500 miles per year pays 10 cents per mile on the basis of 4.3 cents for operating costs and 6.2 cents for fixed costs. Under the fixed cost, 25 per cent is deducted for personal use of the car.

3. An automotive equipment manufacturer pays its salesmen 75 per cent of the actual depreciation of their car at the time of trade-in or sale, with a maximum depreciation allowance of \$40 per month. It has found that depreciation is lowest when cars are traded in after from 13 to 24 months. The company has a factory delivered car price not exceeding \$2,000 plus delivery charges, taxes, etc., and heater, radio and seat covers, on new cars.

4. With a fleet of 300 salesman-owned cars, another company has developed a system which permits basing the allowance on the needs of the individual salesman. Semi-annual reviews of conditions across the nation are made, and the allowances are revised either up or down according to conditions.

In many companies, determination of the most efficient cost control practices for their fleet of salesmen's cars poses a growing problem. Some of the questions faced: Should the company own its own fleet, lease cars, or require salesmen to supply their own? For salesman-owned cars, what is a reasonable mileage allowance? Should the allowance be on a fixed basis or should a sliding scale be used?

The answers to these and many other questions will be found in the accompanying article, based on actual fleet experiences reported to The Dartnell Corporation, a management service organization which provides for its subscribers a biennial survey of business car and light truck cost control practices.

In its latest survey, based on 1952 fleet reports, the Dartnell organization covered 188 companies operating more than 25,000 cars. The material presented here is merely a summary of the highlights of this study. Readers who desire further information concerning the complete services of The Dartnell Corporation may address their inquiries direct to the author at The Dartnell Corporation, 4660 Ravenswood Avenue, Chicago 40, Illinois.

The allowance is based on the use of a certain popular sedan, although salesmen may purchase the car of their choice. In developing the allowance, detailed consideration is given to the following factors:

- Business mileage, based on weekly reports from the field.
- Character of the territory with regard to city vs. country climate, road conditions and geography.
- Annual cost of required insurance (excluding collision) and registration fees.
- Estimated cost per mile of gas, oil, maintenance and tires.
- Estimated parking and tolls expense.
- Premium allowance for drivers exceeding 20,000 miles per year.
- Annual depreciation.

In addition to the annual auto allowance, other traveling expenses are

determined at the beginning of the year for each man. This estimated expense is then converted to a daily allowance by dividing it by the number of days each man works during the year and the resulting figure is used by the salesman throughout the year as a daily entry on his traveling expense vouchers for each day he uses his car.

Weekly payments are made to salesmen, and include a depreciation allowance. This is based on an estimated trade-in value of the popular priced car used as a standard, with depreciation figured at five-sevenths of the annual rate if the salesman works a five-day week, and adjusted for any increase in the work week.

5. One electric company, operating 898 salesman-owned cars and 274 leased cars uses the price of gasoline (TURN TO PAGE 117, PLEASE)

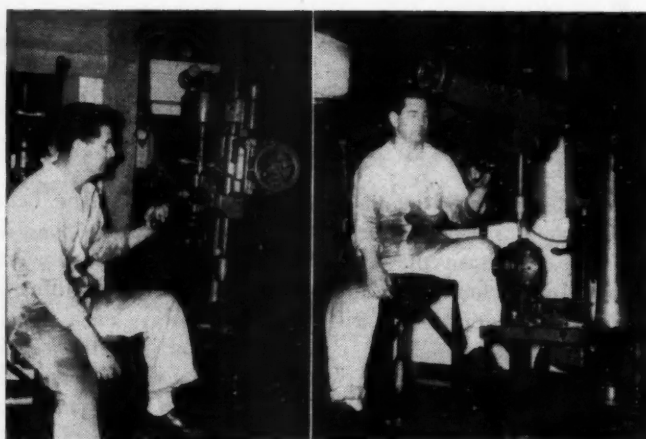
Shop Hints

Here are some swell time savers for fleet shops.
Let us have your ideas for new tools or short cuts
to service. We'll pay \$10 and \$25 for good ones.

\$25

For More Spider Lubrication

By B. M. Sara, Superintendent of Maintenance
Jacksonville Coach Co.
Jacksonville, Fla.



We have prolonged the life of C45 and C45-D spider differentials on our Mack buses through this system of lubrication. Through the plain half of the spider gear casing, we drill four 5/8-in. holes. These holes are spaced evenly around the casing circumference, as illustrated above. Through these holes, we obtain better lubrication of the differential spider and the spider gears than we did before when the only lubri-

cation was through the spider itself.

Using this lubrication system we have reduced wear. We get 100,000 miles of usage instead of our former 50,000 to 65,000 miles. Oil is changed every 18,000 miles, and differentials are removed for complete overhaul at 100,000 miles.

While we use a standard shop drill press to make these holes, they can be drilled with an electric hand drill.

Shop-Made Grinder

By John Streiff, Jr.
Quality Milk Service
Burlington, Wis.

One of the problems faced by many shops is moving equipment. Here is a grinder stand, made in our own shop from scrap and miscellaneous steel, that gives the needed firm foundation and at the same time is easily moved.

Base is 28 in. long by 18 in. wide and is made from 1/2-in. thick steel plate. To this was welded a 32-in. length of old Trailmobile tandem axle

shaft. The of this post steel plate from 1 1/4 in. tack welded

To comp —made fr side of th water, and smaller ha goggles.

Scrap Grinding Wheels

By C. T. Dexter, Shop Foreman
Pacific Power and Light Co.
Yakima, Wash.

Scrap grinding wheels still have a lot of use around the shop. Put a 1/4 by 2-in. bolt through their centers and lock them with double nuts, then grind them down to the various sizes needed. To use one, put it in a 1/4-in. drill chuck and go to work. I have

Used fo

found that larging ho Also, they frames or b for welding places the file could r

Half an Oil Barrel Has

By Albert Renken
Addieville, Ill.

Take an old, well cleaned oil barrel and cut it in half. On each end, weld a handle as shown. Also on each end, weld a flat runner to keep the tub from tipping. It takes about an hour to make and is well worth it. It can be used as a tub for cleaning

Many

parts or f It can be even when hoist beca hung on th dles, it is cupies litt

Inspection Hole Cover

By George C. Favinger
State Roads Commission
Easton, Md.

On late model Chevrolets, there is provided in the floorboard an inspection hole to check the amount of brake fluid in the master cylinder. The cover or grommet that is provided to cover the hole is made of metal with hard rubber covering and beveled completely around. Quite a bit of prying and pressure has to be applied in order to get the beveled

Made

edge to l board. Th Take the edge off length of the reme place. B the cover will go i cover in p

Welding Table Serves

By Frank P. Coulomb
Inglewood, Cal.

A handy steel welding table can be made from a piece of 12 by 3 by 1/2-in. channel iron 36 in. long. Using the channel iron as the top of the table, with the channeled side down, weld on four, 36-in. long legs made of 2 by 2 by 3/8-in. angle iron. The channel iron table top can then be cut out to form guides for welding. For cutting holes, steel to be

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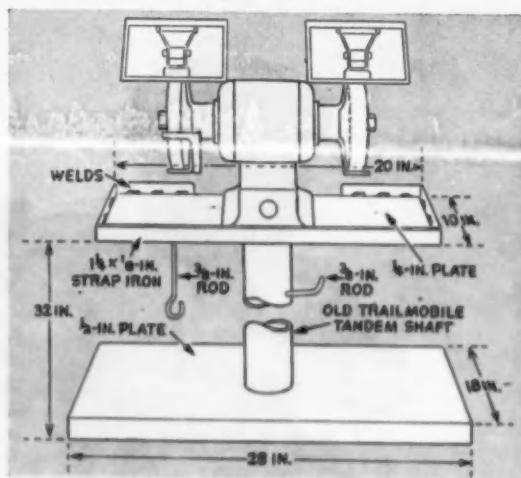
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shaft. The tray, welded to the top of this post, is made from $\frac{1}{4}$ -in. thick steel plate. Tray sides are made from $\frac{1}{4}$ by $\frac{1}{8}$ -in. strap iron and tack welded on.

To complete the job, hang a hook—made from $\frac{3}{8}$ -in. rod—below one side of the tray for a bucket of water, and on the shaft weld a smaller hook to hang a pair of goggles.

\$10



Wheels

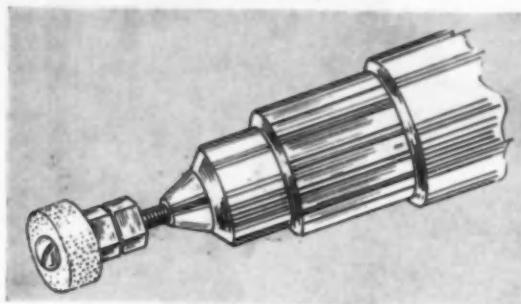
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found that they are quicker for enlarging holes than a rat-tailed file. Also, they are handy for around frames or bodies to smooth-up places for welding or soldering. In some places they do a filing job where a file could not be used.

\$10



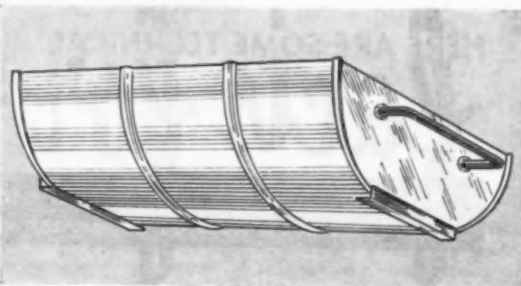
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Many Uses In Shop

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parts or for catching crankcase oil. It can be used in draining the oil even when the vehicle is not on a hoist because of its low height. When hung on the wall by one of its handles, it is out of the way and occupies little room.

\$10



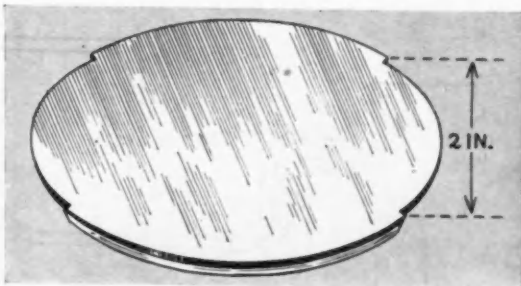
Cover

Made Easy to Re-Install

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edge to lock in the hole in the floor-board. This job can be made easier. Take the cover and grind the beveled edge off on opposite sides for a length of about 2 in. Place one of the remaining beveled edges in place. By lightly pushing down on the cover, the other beveled edge will go into position and lock the cover in place.

\$10



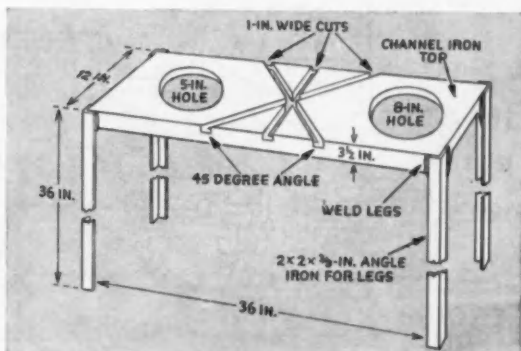
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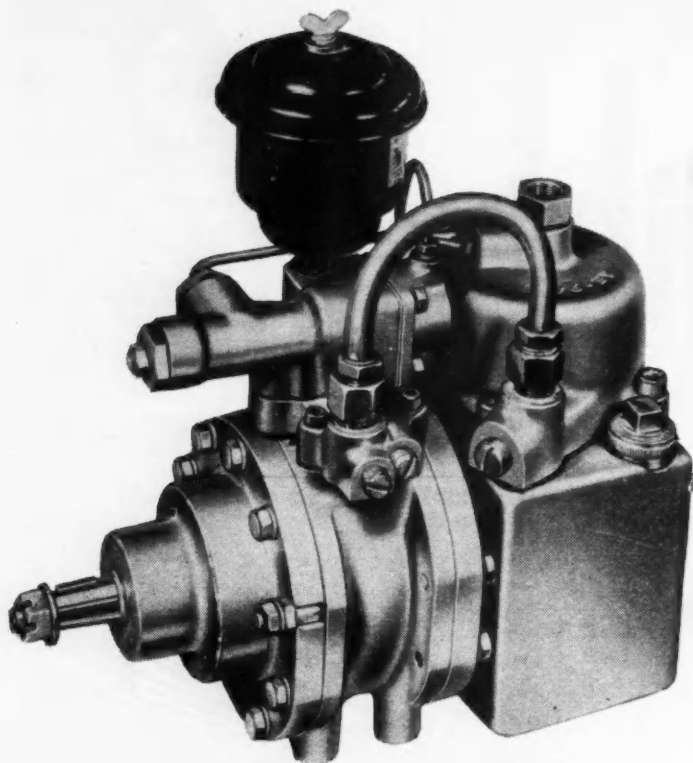
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cut can be laid over a 5 or 8-in. dia hole. For angle or square cuts, the piece to be cut can be aligned with the pre-cut guides in the table top. The cutting torch can then be run along chalk marks or other guide lines on the metal to be cut and the cutting flame will go through the holes provided and not cut the table top.

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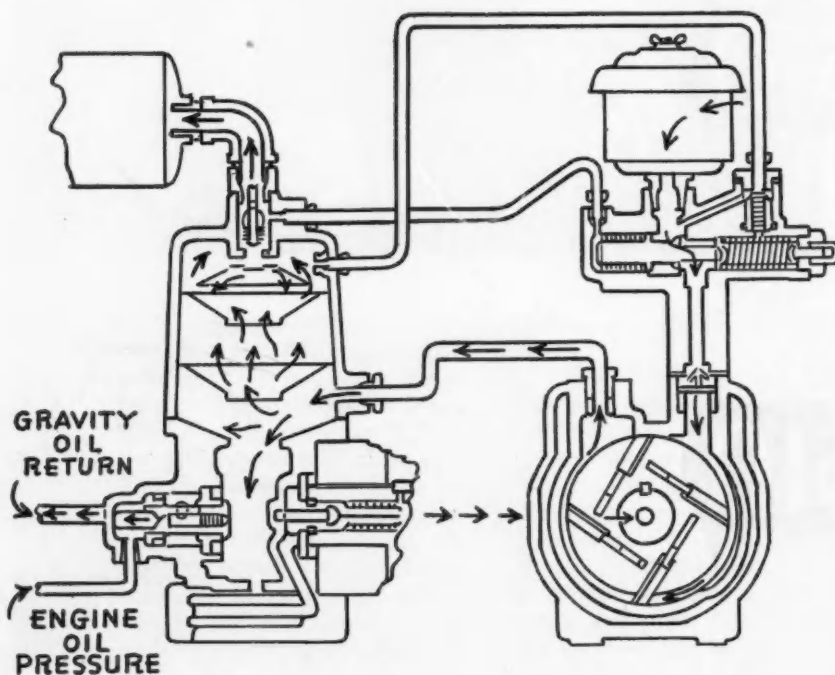
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The Wagner Ro

HERE ARE SOME TECHNICAL *facts for fleets*

Supplementing the shop manual and providing better mechanic know-how on important vehicle components



THE ROTARY air compressor with matched components for actuating brakes on heavy-duty trucks and buses is becoming increasingly popular. Today the Wagner type air brake can be obtained as original equipment on several GMC, White, Mack and ACF Brill bus models. This brake is available as optional equipment on these same make trucks. Up to 40 per cent of current International Harvester heavy-duty models are using Wagner air brakes. This article will attempt to provide a brief description of the rotary compressor as used on these units.

There are three main components in the compressor system—the pump itself, the air dome and oil sump, the control valve or governor. Two types of systems are available. The integral unit combines all of the air compression functional components into one self-contained assembly. The remote dome type used when clearances do not permit mounting the other, separates the components into two separate unit assemblies.

Basic design, however, is similar, and majority of parts are interchangeable. All units are provided with a pressure lubricating system. Models in either self-lubricated or engine-lubricated units are available. Water-cooled units utilize a water jacket surrounding the compressor proper with ports for attaching to the cooling system.

The rotary type compressor, compresses air through the use of an eccentrically positioned rotor revolving

Above. Integral type compressor with pump, air dome and oil sump, governor. Left. Schematic view shows travel of air into filter, through governor to compression chamber. Compressed air moves through sump, where oil is removed, and on to storage reservoir

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ing on a drive shaft. Four rotor blades contact the stator wall, dividing the space into four chambers which provide for intake, compression and discharge. Thus thousands of small overlapping air compression impulses occur per minute to provide a uniform load.

Here's the way it operates. During the pumping cycle the chamber is open to the stator intake. As the blade creates a low pressure area, air is drawn through the air cleaner and control valve into the compression chamber, where it is mixed with oil. The trailing blade closes the intake, and the chamber area is reduced as the rotor continues its revolution, compressing the trapped air.

As the rotor and blades complete the revolution, the chamber is opened to the discharge port, and the compressed mixture is forced into the air dome, where the centrifugal force separates the oil from the air. Baffles trap the oil which drains into the sump. Finally the compressed air is discharged into the reservoir through an outlet check valve.

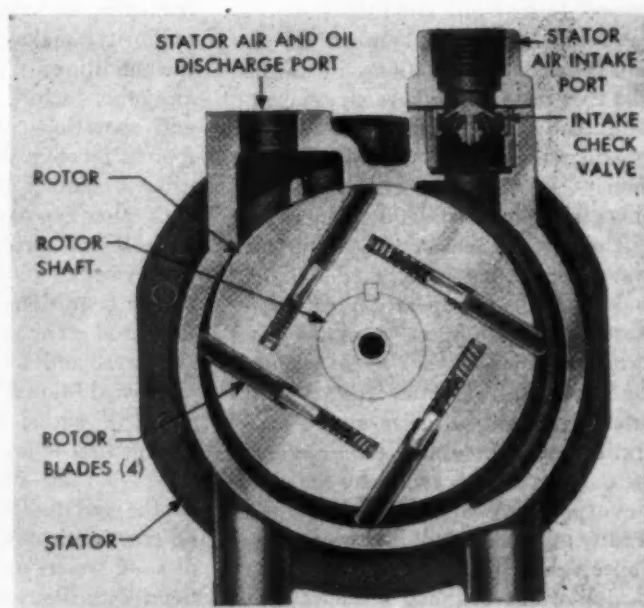
All compressors run continuously while the engine is operating. The actual compression of air is regulated by the control valve through an unloading feature. When a predetermined tank pressure is reached, the compressed air reacts on the control valve bellows, overcoming the regulating spring load to move the shut-off piston down on its seat. As the intake is restricted, vacuum is created. This closes the intake and opens the relief valve to permit the compressed air remaining in the dome to escape to atmosphere through the air cleaner.

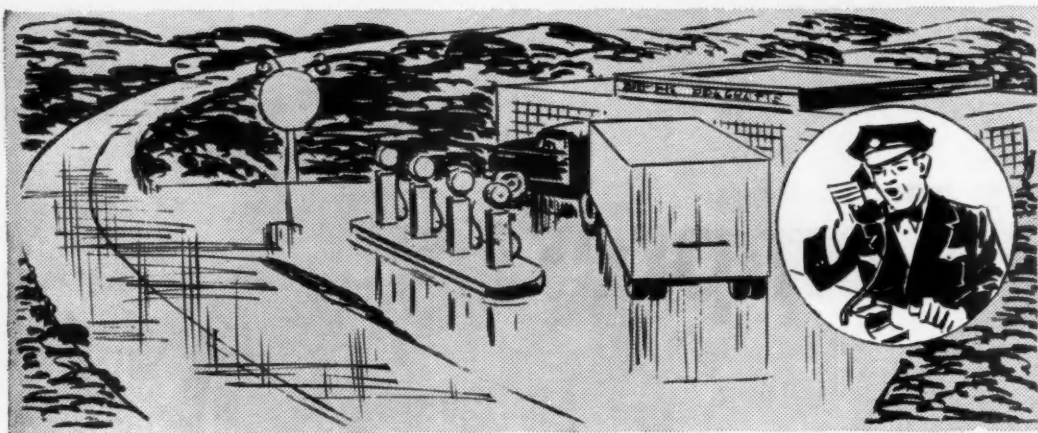
An air bleed at the relief valve partially relieves the vacuum to facilitate the circulation of oil and cooling. Then when tank pressure drops approximately 15 psi, the control valve regulating spring overcomes the bellows load to open the intake and start the pumping cycle all over again.

This type compressor is relatively simple. Friction is low while operating efficiency is high. Oil separation and cooling before air is discharged from the compressor reduces temperature and carbon formation. Service and maintenance can be performed in the shop with relatively few tools.



Above. Remote dome type compressor is designed for use where space is not large enough to mount complete unit. Below. Compression chamber detail shows how rotor is designed eccentric in relation to stator so that air trapped in each chamber is compressed by rotor blades as it turns





Driver, encountering slippery road or other danger, would phone information to State Police

Radio Weather Roundup—Would it

Advance information on specific weather and highway hazards can improve fleet

WHEN an airline pilot approaches any of the country's major airports he is furnished with an exact and up-to-the-minute report on the weather and all other conditions that may affect his landing.

In sharp contrast, the average intercity bus or truck driver, whose "landing strip" may be 400 miles long in the course of a day's run, has little or no organized means of knowing what lies immediately ahead with respect to highway conditions.

The big difference between the air and the ground operations lies in the fact that the airlines have an efficient, continually functioning code signal system which, when combined with hourly weather reports, furnishes pilots with the exact details they need.

There is no reason why a similar system could not be worked out for and with the co-operation of commercial highway users. It would provide immediate benefits to them from the standpoint of both efficiency and safety. It could be the means of generating much favorable publicity for the commercial operators by the simple expediency of making the data readily available to all highway users. Conceivably, it could be developed as an important adjunct to news and

travel programs on many radio and television stations.

How The Air Plan Works

TO SEE how such a highway plan might work, let's take a look at the existing airline plan, which is based upon the international telecommunications code of "Q" signals, long in use by commercial and "ham" radio operators.

At regular intervals the airport manager, or some other responsible authority, makes an observation of the conditions of the runways and/or any other factors related to the safety and operations of aircraft. This he reports through the proper communications channel where it is combined with other reports to give the pilot of an in-bound aircraft not only a complete weather picture but also details of the condition of the runway surfaces and other necessary operational functions and facilities of the field.

This additional information, known as a "Q" signal because of its identifying first letter, may range all the way from the information that one of the red lights on the top of an obstruction is out, to a report of puddles of water on the runway. The tieup with the weather observation is

natural for aviation because of communications procedures. An interesting significance in the combination of the two can be shown in the case where the weather observation as transmitted over the teletypewriters indicates wet snow falling for several hours. But with it melting as it fell, the runways would be only wet; or conversely, there may be six inches of wet, heavy snow on the runways.

How A Highway Plan Could Work

SIX inches of snow is serious though not necessarily paralyzing to an airline operator. The same six inches of wet snow on a highway could be very important, especially if it fell on a mountain side. If the mountain route was a "short route," used normally to cut mileage but with an alternate low-level, though longer, route available, this condition might well justify dispatching over the longer route.

Our proposal is that a similar "Q" system of reporting conditions on the highways be developed along the lines of the airways code so that, with the transmission of only a few numbers and letters, the details of the obstructions on the highways from whatever

(TURN TO PAGE 122, PLEASE)



Who would radio facts to local police

it Help You?

efficiency. Here's a way to get it

What You Can Do

Jim Fidler is heard each morning on NBC-TV's national television network handling the nation-wide weather roundup with Dave Garroway of the "TODAY" program. He is the nation's top expert on weather broadcasting.

In this "trial balloon" article, written especially for Commercial Car Journal, he makes a specific proposal that can be of material value to YOU. But neither Fidler nor Commercial Car Journal can make the plan work. It needs your co-operation.

The first step is an interchange of ideas. Does the plan make sense to you? Can you visualize it working along your specific routes? Have you ever seen any attempts at a similar plan? Please address: Weatherman, Commercial Car Journal, Chestnut & 56th Streets, Philadelphia 39, Pa.



Which in turn could be relayed to local radio stations for broadcasting or short-waved to area fleet terminals



By Arthur C. Butler
Director
National Highway Users Conference

FORTY-FOUR state legislatures have met in 1953 and only three remain in session at the present time—Alabama, Ohio and Pennsylvania. Legislatures in Georgia, New Jersey, and Wisconsin are in recess.

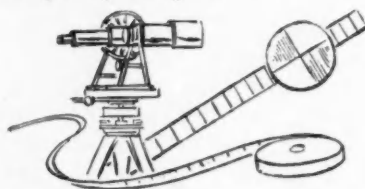
Funds for Highway Programs

CALIFORNIA has adopted a ten-year highway program to be financed by increases in registration fees and motor fuel taxes. It will also provide more than \$500 million for county roads during this program period. Colorado passed a law to create a Highway Users Tax Fund, 65 per cent of the proceeds will be allocated to the State Highway Fund and 30 per cent to counties, and 5 per cent for administration.

In addition to registration fee and motor vehicle tax increases, Maryland authorized a total bond issue of \$380 million for a twelve-year highway program. Missouri has increased the maximum amount of state-aid for county roads from \$750 to \$1,000 per mile.

New Hampshire authorized a \$5 million bond issue for state and local highway improvements, to be repaid from the additional 1¢ gasoline tax levied in 1951. A New Mexico law allocated money in the Highway Debt Retirement Fund to the counties for the settlement of right-of-way debts.

North Dakota empowered the State Highway Commission to issue an additional \$3 million in revenue anticipation certificates to provide funds to match Federal road aid. These certificates will be paid from the proceeds of 1¢ of the present gasoline tax.



Adding up the Leg

... to give fleetmen a summary of

In addition to passage of an axle mile tax and a 1¢ gasoline tax increase, the legislature of Ohio authorized a highway bond issue of \$500 million. The bond issue is subject to referendum. Oregon authorized a \$32 million bond issue for construction of state highways and bridges with expenditure of the funds limited to \$10 million in the calendar year 1953, \$15 million in 1954 and \$7 million in 1955.

The Governor of Tennessee approved a bill to permit issuance of \$24 million in highway bonds—\$10 million for arterial highways and \$14 million for rural roads. Washington authorized issuance of \$18 million in bonds to be amortized from the motor fuel tax to provide funds to offset the increased construction costs on primary state highways No. 1 and 2.

Taxes and Fees

THUS far four states have increased their motor fuel tax rates

—California, raised its gasoline tax from 4½¢ to 6¢ per gallon, and the rate of diesel fuel from 4½¢ to 7¢; Iowa from 4 to 5¢ per gallon; Maryland and Nebraska from 5 to 6¢ per gallon. A 1¢ increase pending in the Ohio legislature seems likely to pass. The California tax rates will be reduced ½¢ per gallon after two years.

California increased weight fees on commercial vehicles 33 per cent, raised operators' license fees from \$2 to \$3 and the registration fee on passenger cars from \$6 to \$8. After two years commercial vehicle fee increases will be reduced from 33 to 22 per cent, and registration fees for passenger cars will be reduced from \$8 to \$7.

Unsatisfactory experience with the ton-mile tax in Idaho led to its repeal and as a substitute therefor, a new truck registration fee based on gross weight plus a graduated use fee for vehicles having a gross weight in excess of 24,000 lb. Vehicles weighing in excess of 24,000 lb are required to pay an additional fee for each 1000 miles travelled in excess of 30,000 miles.

Beginning January 1, 1954, Illinois operators of trucks, tractors, trailers and buses will have the option of paying either a flat weight tax or a mileage tax. The flat weight



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legislative trends in taxes, weight and size limits, highway and equipment

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tax in most brackets is at the same rate as 1953 fees, and the increase scheduled to become effective January 1, 1954, was repealed. The mileage weight tax ranges from \$2.50 for a loaded vehicle weighting 3000 lb or less, plus two mills for each mile travelled in excess of 2000 miles to \$567 for a loaded vehicle weighing 72,000 lb, plus 114 mills for each mile travelled in excess of 5000 miles.

Maryland increased registration fees on buses and trucks approximately 50 per cent, passenger car registration fees were increased approximately 34 per cent. Both will become effective April, 1955.

Montana increased license fees for trucks operated more than 24,000 miles about 25 per cent. Another law changed the trailer registration fee from a \$10 flat fee to a graduated schedule based on maximum gross weight, ranging from \$2 to \$10.

Nebraska provided a general upward revision of fees. Those for buses are graduated up to \$380 if weight is 34,000 lb. Fees for commercial trucks up to 25 tons gross weight are graduated to \$770.

New York passed laws to tighten application of the ton-mile tax. One measure increased tax rates on vehicles with gross weight over 64,000 lb. Another abolished exemptions from ton-mile taxes for vehicles operating within zones established by the Public Service Commission and those vehicles used exclusively within incorporated limits.

North Dakota raised ton-mile tax rates to range from 1¢ (instead of ¼¢) per mile for vehicles weighing unladen, 3 tons or less, to 7¢ (instead of 2½¢) per mile for those in excess of 8 tons. New increases in truck registration fees range from \$3 per ton for vehicles weighing from 6 to 12 tons to \$5 per ton for those over 12 tons.

The Ohio legislature has passed an axle mile tax ranging from ½¢ per mile on 3-axle trucks to 2½¢ per mile for combinations with 5 or more axles.

Oklahoma imposed a tax upon inter-city buses of ½ mill for each mile each passenger is transported.

Oregon redefined Class "D" vehicles under its mileage tax to include operators who do not purchase sufficient fuel in Oregon to propel their vehicles the extreme miles travelled within the state.

South Dakota imposes additional registration fees on passenger cars ranging from \$5 to \$10; additional fee

Early this year in a special article for Commercial Car Journal (Jan., page 74), Mr. Butler noted that 44 state legislatures were meeting in regular session this year, forecast that many of the new laws enacted would be concerned with raising the large amounts needed for more adequate highways.

In this special summary, now that the bulk of the various state legislatures have adjourned, Mr. Butler gives a summary of the national scene on truck and bus legislation, provides a guide to trends in trucking industry legislation.

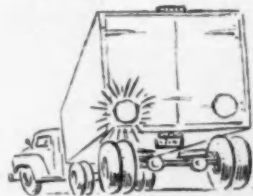
on trucks and truck tractors range from \$7 to \$15, plus \$5 for each additional 1000 lb in excess of 6000 lb; trailers and semi-trailers an additional fee ranging from \$5 to \$15 plus \$3 for each additional 1000 lb in excess of 5000 lb.

Tennessee increased maximum gross weight from 42,000 to 55,980 lb and imposed a fee of \$350 for private trucks in that classification and \$500 for common carriers.

After the ton mile tax was ruled unconstitutional in Wisconsin, a new law was enacted to increase truck registration fees to produce an additional \$11,500,000 annually.

Proposed mileage taxes failed of enactment in Arkansas, California, Colorado, Connecticut, Maine, Maryland, Massachusetts, Montana, Nebraska and West Virginia.

Sizes and Weights



ARKANSAS eliminated its vehicle weight formula and provided a gross weight total of 56,000 lb on load carrying axles.

California increased trailer or semi-trailer length to 40 feet and permits 3-axle buses a length of 40 feet. Colorado increased bus length to 40 feet and permits urban and suburban buses operated within a radius of 15 miles of municipalities a width of 102 inches.

(TURN TO PAGE 170, PLEASE)



Part of display of trucking equipment used for the promotion is shown parked in front of the stores

Newspaper ads were also used. This one promoted the rodeo

THRUWAY PLAZA'S
Salute to Truckers

NOW GOING ON! WESTERN NEW YORK'S MOST THRILLING BARGAIN EVENT!
Made Possible through the Cooperation of America's Leading Trucking Firms and the Thruway Plaza Merchants

DON'T MISS THE EXCITING TRUCK ROADEO
TOMORROW AT 10 A.M. FREE! In the Thruway Parking Area! Deal Event of Trailer-Trucks and Straight Trucks!

Sponsored by the TRUCKING FEDERATION of the NIAGARA FRONTIER!

THRUWAY PLAZA
BUFFALO AND WILSON AVE.

THE ROADEO
This new event is a thrilling event for all truckers and their families. It is a day of fun and games, with a variety of contests and prizes. The event is held in the Thruway Plaza Parking Area, which is a large, open area with plenty of space for parking and driving. The event is free of charge and is open to all truckers and their families. The event is a great opportunity for truckers to meet and greet each other, and for families to enjoy a day of fun and games. The event is a must-see for all truckers and their families.

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Salute To

With displays, a parade, radio and center promotes trucking, reaps be

WHEN truckers in the Buffalo, N. Y., area were offered an opportunity to join in a large-scale merchandising promotion, they made the most of it. The result: Thousands of people along the Niagara Frontier were shown the importance of the trucking industry in moving the nation's goods and their own individual needs safely, quickly to the consumer's door.

The plan originated with the Thruway Plaza Merchant's Association, representing forty stores in a shopping center near Buffalo. Through

COMMERCIAL CAR JOURNAL, August, 1953



This float led a long and colorful parade through the city. Union sponsored, it stressed driver courtesy

In many stores displays of driver testing equipment were set up

ate To Truckers

radio and newspaper advertising, Buffalo shopping reaps benefits from business increase and goodwill

the joint efforts of this group, the Trucking Federation of the Niagara Frontier, and major trucking firms and service organizations in the trucking industry, the promotion was a spectacular success.

The following is a word blueprint of the plan. For truckers in other areas, it may supply ideas on how a similar promotion might be set up in their own neighborhood.

In a six-day promotion, from June 24 through June 30, merchants of Buffalo's Thruway Plaza shopping center stressed the theme "Along

every highway to the Thruway Plaza, America's largest trucking firms rush merchandise safely, swiftly, economically, to save Thruway Plaza shoppers money."

For truckers in the area, the program was a valuable public relations campaign. For the merchants it was a profitable sales promotion, boosting sales (particularly in soft lines and women's wear) and drawing thousands of visitors to their stores. Success of the plan may also be gauged from the fact that it is likely to become an annual event in the area, and

is also to serve as a prototype for similar programs in New York State.

Co-operative Effort

COST of the promotion—including newspaper and radio advertising, store and window display areas—was born by the merchant's association. Space for displays and exhibits of truck operators and other representatives of the trucking industry was also provided on the shopping center's parking lot.

In return, truckers supplied graphic, colorful displays of equipment and procedures, took part in an impressive, rolling parade through the city and staged the first Niagara Frontier Truck Rodeo.

Displays depicting the important every-day services of the trucking industry were supplied by local truckers and by fleets across the country. The Petroleum Industry, The American Trucking Associations, and leading truck and trailer manufacturers and suppliers provided displays showing the strong emphasis that the trucking industry puts on safety. The public was also able to take driving qualification tests in Atlantic Freight Lines' mobile driver testing laboratory.

On permanent display in the parking area in front of the stores were more than 40 trucks and tractor-trailers, representing the major firms that serve the Buffalo and western New York area. Each piece of equipment carried complete safety equipment gear and emergency roadside service material. Attendants were on hand at all exhibits to explain the use of the equipment to the public. Displays were also set up in store windows and interiors.

Trucks on Parade

TO DEMONSTRATE the trucking industry's scope of operations, the plan included a long colorful parade across the city. This was unique in the city's public activities and presented a rolling caravan of more than 150 trucks representing every phase of the industry, from small milk de-

(TURN TO PAGE 160, PLEASE)



24-ft body plus 28-ft trailer gives combination 52 ft of load space and 60 ft overall length

V BUILT around the Cummins NHHB-600 horizontal (pancake) diesel engine, a new model has been added to the White-Freightliner line. Labelled the "Spacemaker," it has the engine installed under the frame and behind the cab, makes extensive use of aluminum to achieve an actual chassis scale weight of 13,094 lb.

Design of the new unit makes it possible to use a 24 ft body on the truck instead of the 22 ft size used on most COE models. Towing a 28 ft full trailer, the combination provides 52 ft of body space in a 60 ft overall length. Used as a "dromedary" with 13 ft 6 in. box and 35 ft semi-trailer, it provides 48½ ft of body space in a 55 ft overall length.

Chassis weight of 13,094 lb is obtained with aluminum wheels, 10:00 x 20 tires, standard 200 hp engine, standard transmission, drive axles and 100 gal aluminum fuel tank. Weight distribution is 5540 lb on the front axle, 7554 lb on the rear. Standard front axle is the Timken 27,061, a 14,000-lb capacity unit with tapered kingpins and White-Freightliner aluminum hubs. A Shuler 15-E, 15,000 lb capacity axle, also with aluminum hubs, is available as optional equipment.

General Specifications

Wheelbase: 190 in. (min.)
Overall length: 338 in.
Chassis weight: 13,094 lb (aluminum wheels)
Engine: Cummins NHHB, 200 hp
Clutch: Spicer 14 in., 2-plate
Transmission: Fuller R-950-C
Front axle: Timken 27061, 14,000 lb capacity
Rear axle: Timken SW-3458
Service brakes: Front—none; Rear—Timken "P" series 16½ x 7
Frame: ¼ in. alloy steel, aluminum cross members
Wheels: Lightweight disc, 22 x 7.50 rim

SPACEMAKER Line Use

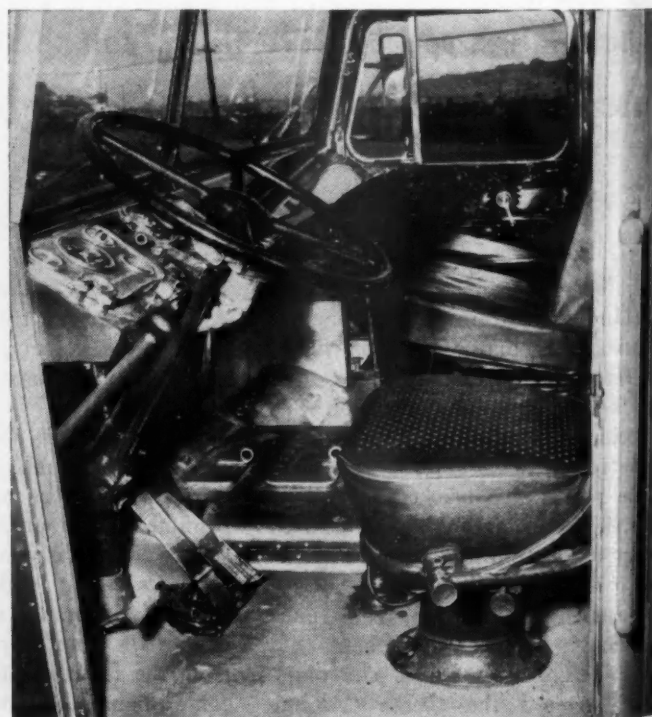
Aluminum housings and carriers are used on the Timken SW-3458 standard rear axle. The Freightliner Dual Drive is available as optional equipment. Standard wheels are Budd lightweight disc, 10 hole, with 22 x 7.50 rim. Alcoa forged aluminum disc, 10 hole wheels are optional.

The frame is ¼-in. chrome-manganese heat treated alloy steel with aluminum cross members. The 100-gal aluminum fuel tank is mounted with aluminum brackets. The shallow (48 in.) cab is also aluminum,

as are the battery box and the cab grab handles.

Following the West Coast practice for multi-axle vehicles, there are no front wheel brakes. Service brakes are on rear wheels, consist of Timken "P" series 16½ x 7 in. brakes with a Westinghouse air brake and break-away system. Disc type emergency brakes are cross member mounted.

The electrical system uses four 6-volt, 19-plate batteries, has a 24-volt starting circuit, 12-volt lighting circuit.



The cab "V" type v able drive dow win dual mirror defroster marker li aluminized hooks.

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Left. Interments, a

Right. R battery box,

Below. C shows acc

With Cummins NHHB-600 "pancake" diesel engine mounted under the frame and behind the cab, White-Freightliner's new . . .

ne Uses Light Weight Metals

The cab features full-visibility, "V" type windshield, four-way adjustable driver's seat, passenger seat, window wings, side cowl ventilators, dual mirrors, dual air wipers, heater, defroster fan, driver's sun visor, marker lights, ash tray, dome light, aluminized grab handles and coat hooks.

All instruments are mounted in an illuminated panel and are grouped directly in front of the driver.

In addition to normal instruments, standard accessories include a low air

pressure warning buzzer, water temperature alarm, and low oil pressure indicator light.

Test service operations indicate that engine and components are completely accessible. In one test the center cylinder head was removed and reinstalled, valves were checked and set and injectors were set and primed in an elapsed time of two hours and seven minutes. Removal of the starter and oil pan took 14 minutes. Removing and replacing the fuel pump took one hour and ten

minutes. These test service operations were performed by a mechanic from a Cummins dealership who had no previous experience working on the new engine.

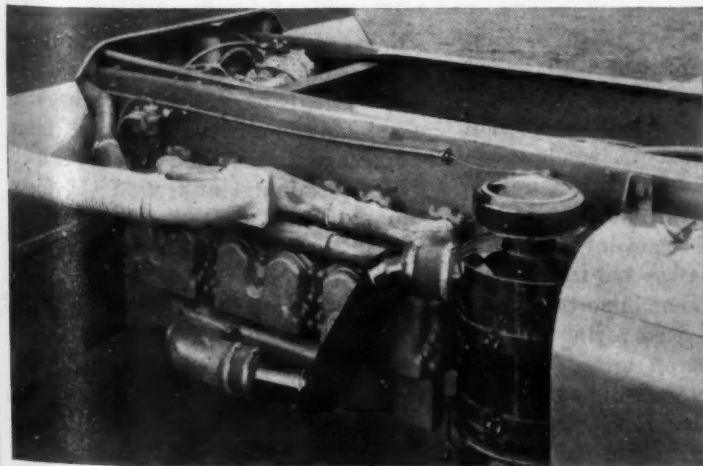
"Upstairs" Sleeping

ALSO recently announced is "upstairs" sleeping compartment now offered as optional equipment on Freightliner's WF-64 Dual Drive truck chassis. It is installed over the driver instead of in the conventional (TURN TO PAGE 164, PLEASE)

Left. Interior view of cab shows compact arrangement of instruments, adjustable driver's seat and full visibility windshield

Right. Rear view shows frame construction. Cross members, battery box, fuel tank and spring hanger brackets are aluminum

Below. Close-up of left side of engine as installed under frame shows accessibility of cylinder heads for removal and servicing



Cut Shop Costs—

Get the Most Out of Heating Do

Comfortable working conditions increase efficiency, boost employee morale,

THIS may not seem to be the best time to suggest that you should consider next winter's heating problems. Chances are a few cool breezes around the knees might be mighty welcome right now.

But an inefficient heating system in the shop or terminal can cost you wasted money. So a few minutes spent in checking it now may mean dividends for you next winter.

Proper heating of the fleet shop and truck terminal will produce three-fold dividends: greater efficiency, improved employee relations and reduced operating costs.

Boosts Morale

AS A case in point, Ward Trucking Corp., Altoona, Pa., reports that since replacement of their old steam radiators with a gas radiant heating system, morale of employees in the shop has improved considerably and loss of time due to winter ills has become negligible. The previous coal-fired system heated approximately 19,500 sq ft. The current system heats 33,000 sq ft, including the offices and dock.

"Our heating bills are about the same," says W. J. Adams, Superintendent of Equipment and Buildings, "but figured on a square foot basis, heating cost is almost one-half less and much more satisfactory." This system was carefully planned and designed to meet Ward's specific needs. Cost of the heating plant was \$15,000. Annual yearly operating cost averages \$1,492.

By Stuart Covington

Before deciding on any one type of heating system, a thorough survey should be made to determine the general requirements the system will have to meet. Basically, this survey should establish the total heating capacity required, directions and distances the heat will have to be thrown, the conditions of occupancy, the height of ceilings and the existence of obstacles to heat distribution.

Estimating Needs

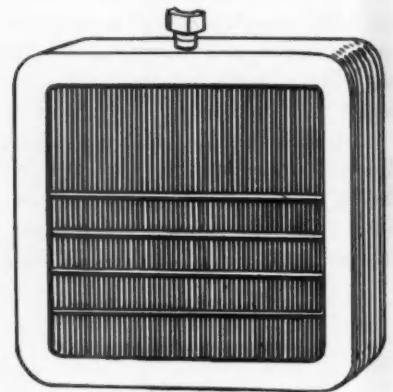
DIFFERING widely as heating installation conditions do, there are no fixed rules for estimating the heating requirements of a particular area. However there are certain factors which will influence the amount of heat production needed.

These include:

1. The coldest local winter temperatures;
2. The area of "exposed" wall surface (walls in contact with outside air);
3. Heat loss due to infiltration of cold air around doors, windows and other openings and cracks;
4. The area of windows in the "exposed" walls (because of infiltration of air through sashes and framing.)

Infiltration is an important factor to consider when surveying the heat requirements of an area. The cold air that leaks into a building must be heated if the area is to remain at a comfortable temperature, and the heat

Typical of self-contained unit heaters, the model below heats small area



necessary for warming this incoming air may be a considerable part of the total heat requirements of the area.

The quantity of incoming air may be determined by measuring the linear feet of cracks around the doors and windows of walls exposed to outside air. If an area has openings on a single exposed wall, the total linear crackage on that wall should be used in determining infiltration. If there are openings on two exposed walls, total crackage of the wall with the greatest crackage should be used. Using this figure, a heating engineer can determine the amount of heat needed to keep the room at a desired temperature.

In fleet shops, a major infiltration source is the frequent opening and

This model circulates



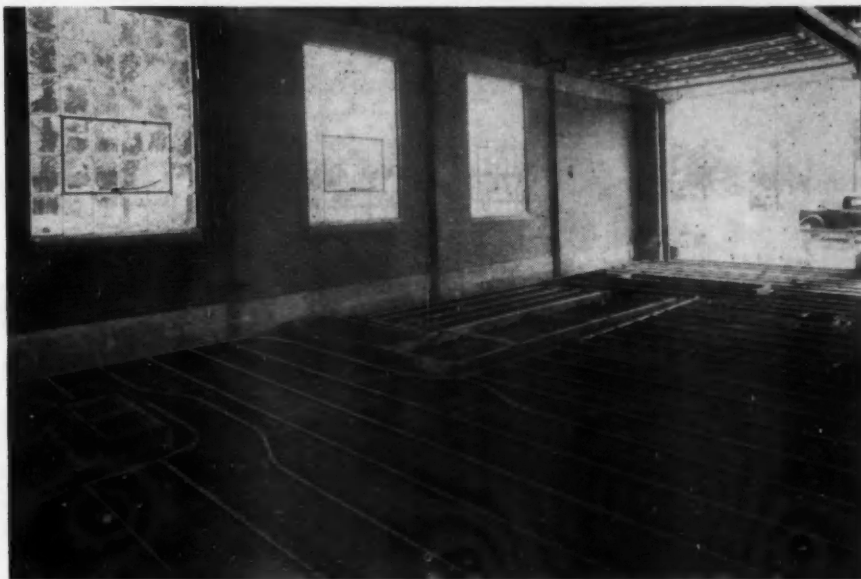
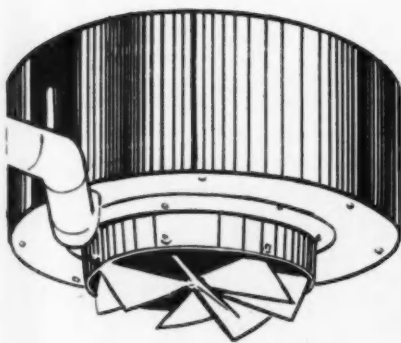
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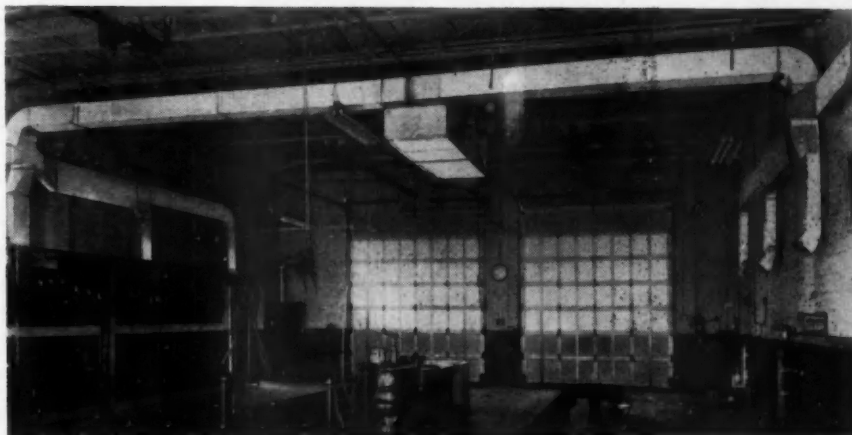
reduce fuel bills

This model is mounted on the ceiling, circulates heat from a central boiler



An example of one type of radiant heating-under-floor piping, this installation uses wrought iron pipes. Another system uses copper serpentine coils

Using a system of ducts to supply an even distribution of heat throughout the area, this self-contained heating unit is adequate for small shops



incoming part of the area. g air may during the the doors used to out- enings on otal linear d be used. If there sed walls, with the be used. g engineer t of heat a desired

closing of the shop doors for entrance and exit of vehicles. While the exact degree of such infiltration cannot be determined, a rough estimate can be made by measuring the area of the doors and estimating or noting the average number of times they are opened per day.

Types of Heaters

THERE are three types of heating units that are assuming a dominant position in commercial heating systems today. These are the unit heater, the recessed wall radiator and the radiant heating system.

Unit heaters have many advantages which make them well-suited to fleet facilities. They permit controlling the heat to areas where needed, so

that small patches may be heated while the surrounding area remains unheated, thus effecting a considerable saving in fuel. Since they are usually equipped with either a fan or a blower, they may be used as air circulation systems during warm weather. The fans or blowers also force circulation of heat, reducing stuffiness and obnoxious fumes in the area and making workers more comfortable. Unit heaters may be set up to "blanket" draughts of cold air from frequently-opened doors, reducing the effect of these openings on the area's temperature. This type of heater takes up comparatively little space, eliminates all piping and radiation bases.

Three standard types of unit heat-

ers are available: suspended propeller-driven fan units blowing generally in a horizontal position; suspended propeller-drive units blowing vertically, and floor, wall and ceiling-mounted blower fan units.

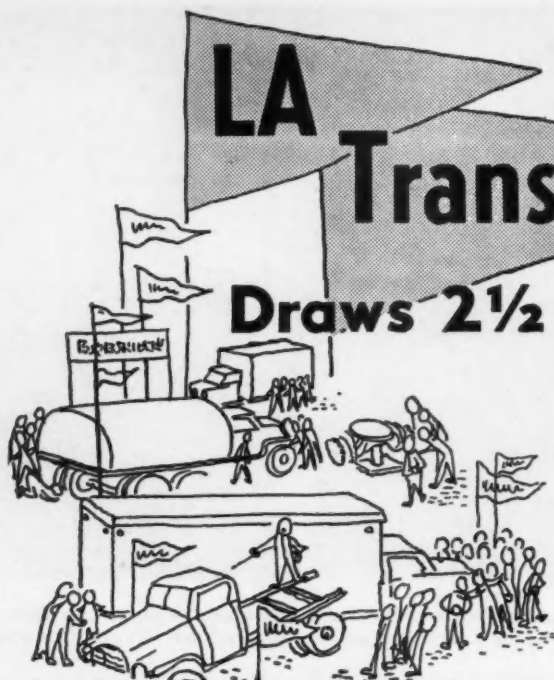
Gas or oil-fired unit heaters are self-contained, pre-assembled units having burners, a radiating surface, a power-driven fan, blowers which force or draw air into radiating surfaces, and attachments for directing warm air to the proper points.

Steam unit heaters are similar to the gas or oil-fired models except that they are not direct-fired and must be connected to the building's steam supply as in the case of other steam heating equipment. They have a

(TURN TO PAGE 176, PLEASE)

LA Transport Show

Draws 2½ Million-Dollar Display




WHILE most parts of the country have firm convictions that truck shows are a thing of the past, Los Angeles keeps on setting new records. There were more than 130 exhibits at the fourth annual National Truck, Trailer and Equipment Show held there a month ago.

The four-day show, said to be the largest display of its kind in the country, presented \$2½ million worth of the latest in trucks, from half-ton pickups to 40-ton, over-the-road tractors and trailers, as well as a variety of accessory equipment from mufflers to directional lamps and radiator bibbs to brake linings.

Over 130 exhibitors participated in fourth annual event

Exhibitors distributed more than 100,000 tickets to the show. "Numerically, attendance compared favorably to past shows, but qualitatively it was the best ever. Exhibitors reported a brisk business with many sales direct from the floor," according to the show committee's general chairman,

W. K. Stevenson, Southern California Gas Co.

Interesting new developments on display, illustrated above, included:

1. A lightweight, 35-ft semi-trailer made by Weber Trailer and Mfg. Co., equipped with air suspension recently

(TURN TO PAGE 126, PLEASE)

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PUBLICATIONS

FOR YOUR CONVENIENCE USE THE POSTCARD ON NEXT PAGE

L1. Turnpike Tips

This reprint from a nationally circulated magazine will provide your drivers with some accident preventing ideas, especially in connection with travel over so called "super," "limited access" or multiple-lane, high-speed highways.

It discusses some of the problems that arise in driving at speeds in excess of 50 mph. It points out that speeds above 50 mph are not safe, noting that chances of not being killed in an accident are three times better if you are doing under 50.

After discussing the physical and mental effects of driving over 50 mph, including some excellent examples, the author concludes his story with 15 rules for driving on high-speed highways.

Highlights from these rules include: chances of staying out of an accident at under 50 mph are five times as good as if you go over 50 mph; before getting involved in high speed traffic, try testing yourself and your car where there is no traffic; tire wear increases rapidly at high speeds; passing a car going 35 mph is like passing a string of 18 parked cars, imagine what happens when the car you are passing is going 60 mph.

To get a copy of this discussion of high speed highway traffic hazards, circle L1, on the postcard.

L2. Cooling System Data

Here is a handy, pocket-size, 40-page cooling system service manual that will come in handy both in hot weather when you need a top performing cooling system and in cold weather when you can run into anti-freeze problems.

First section of the book is on anti-freeze problems. Included here are directions for installing anti-freeze, a cooling system capacity chart, instructions for mixing anti-freeze solutions,

removing trapped air, winter inspection of the cooling system, a discussion of anti-freeze testers and testing procedures.

Second section is a 15-page discussion of cooling system service problems. In it are described (1) loss of protection by overfilling radiator, (2) hidden causes of overflow, (3) hose failures, (4) thermostat failures and testing, (5) effects of overheating and of overcooling on engine lubrication, (6) overheating damage to engine parts, (7) water pump troubles and service, (8) inside and outside leakage of water jacket, (9) exhaust gas leakage and air suction into the cooling system, (10) radiator leakage, (11) corrosion damage, and (12) rust clogging.

Concluding section of the booklet is a special presentation on cooling system cleaning and corrosion prevention. It is divided into rust and corrosion inhibitors, preventing aluminum cylinder head corrosion, cleaning compounds and how they work, cooling system cleaning and pressure flushing.

The publication is well illustrated, and a special section on the back cover is a brief trouble shooting guide for radiator and cooling system problems. To get your copy of this handy booklet, circle L2 on the postcard on the next page.

L3. Electrode Data

This interesting four-page, letter-size booklet tells about the development and use of low hydrogen electrodes. It describes underhead cracking when hardenable steel is welded and what investigation has shown to be the cause. Several cross-sectional photographs and diagrams illustrate the problem. Last two pages in the publication are a discussion of low hydrogen electrode manufacture, how they should be stored and handled, welding procedure using them

and what applications they are used for. To get your copy of this booklet, circle L3 on the postcard.

L4. Cost Finder

Here is a handy, pocket-size slide rule to help you determine your tire cost per mile quickly and easily. When you know your fleet average miles per tire, the cost per mile is easily determined by setting the slide at that figure and then, reading below, find the price per tire you are paying. Above that figure, in the slot, will be your tire cost per 1000 miles. Dividing this figure by 1000 will give you your tire cost per mile. The slide rule ranges from 15,000 to 90,000 miles average life, and the tire price scale goes from \$25 to \$200. To obtain one of these handy cost guides, circle L4 on the postcard.

L5. Spark Plug Chart

A new spark plug specifications wall chart is available to fleetmen. It lists Auto-Lite spark plug data for trucks and buses as well as passenger cars, farm machinery, marine engines, etc. Included are listings for a dozen different types of engines.

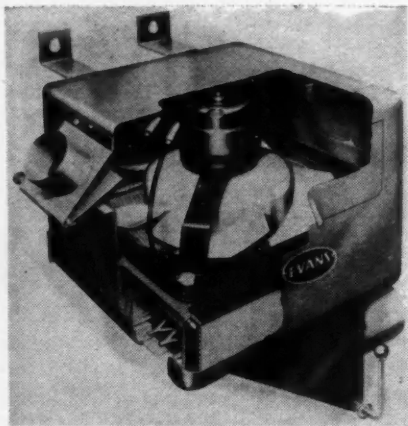
A special feature of the chart is a section on spark plug maintenance and installation. Circle L5 on the postcard on the next page for your chart.

L6. Decimal Chart

A handy, time-saving decal shows decimal equivalents in 64ths from 1/64 through 63/64. It measures only 6 in. long by 1½ in. wide. It can be fastened to desks, work table tops, tool boxes or most any other handy shop location. Figures on the decal are printed in red and black ink on a white background to make the chart easy to read. To get your decal, circle L6 on the postcard.

NEW Products

ADDITIONAL DETAILS AVAILABLE UPON REQUEST VIA POSTCARD

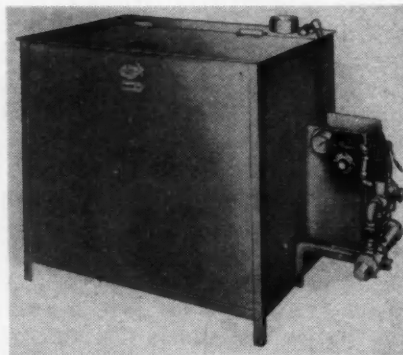


P1. Truck Heater

A new truck cab heater-defroster small in size but high in BTU output has been introduced by Evans Products Co., Plymouth, Mich. Designated as Model No. ED 75, the new heater can be adapted either for recirculating or fresh air. It has a 17,800 BTU output. Among its features are: split core construction of tube and fin design; heavy cast brass tank to resist pulsation; threaded bosses for tubes to eliminate soldered connections and provide leak-proof connections; increased air delivery; five-blade 7½-in. diecast magnesium fan; heavy-duty bus type motor. Dimensions are 8 1/16 by 8 5/16 by 8¾. Defroster air output at the windshield is 50 cfm.

P2. Cable Tools

Two new tools to simplify and save time for mechanics in making up and assembling speedometer cables and casings from bulk stock have been made available by AC Spark Plug, division of General Motors. One of the tools is known as a "Cable Staking Tool." It is constructed with cutoffs for both .130 and .150-in. dia cables. Provision is also made to square cable ends and assemble collars and fillings. The other is called a "Casing Swaging Tool." It has provision for swaging ferrules to .260, .316 and .437-in. dia casings.



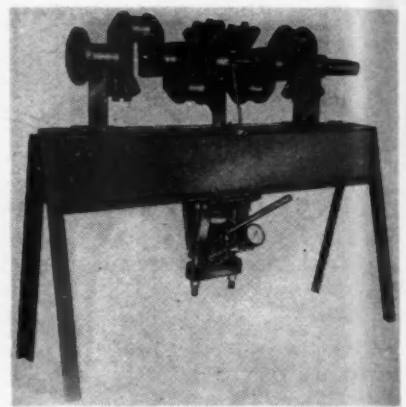
P3. Radiator Vat

A newly designed vat for hot chemical cleaning of radiators is now being offered by Inland Mfg. Co., Omaha, Nebr. Designated as the Model "O" Hot Vat, the new model holds up to three average size radiators and is rated by the manufacturer to clean up to ten radiators in an eight-hour day. Gas heated units are equipped with an economy-jetted immersion burner. The vat can also be equipped for steam or electricity. Safety and temperature controls are available at additional cost. It occupies 51 by 26 in. of floor space.

P4. Extinguisher Unit



A compact, self-contained and automatic fire protection unit, "Firetox" is announced by Standard Safety Products Co., Lansing, Mich. The unit is hung from the ceiling on a bracket (furnished) and requires no other parts. The extinguisher goes into action automatically when temperature rises to 165 deg. F. Its solder fuse melts releasing the extinguishing agent (carbon tetrachloride) as a vapor that settles over the fire like a blanket. There is no water or chemical damage.



P5. Crankshaft Press

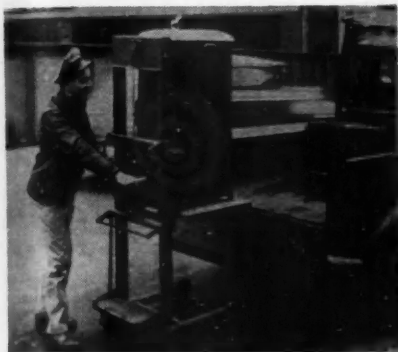
Lempco Products, Inc., Bedford, Ohio, is now manufacturing a crankshaft straightening press. It features a heavy horizontal frame, with an underslung hydraulic pump and cylinder which, in turn, is fastened to the crankshaft by means of an open-throat clamp. Pressure on the main bearings is exerted with positive force perpendicular to the shaft until the dial indicator mounted on the frame shows that the shaft has been aligned at each successive main bearing. The V Blocks are movable along the bed of the press, so is the hydraulic pump, making it possible to straighten small shafts or large shafts with minimum handling.

P6. Low Pressure Signal

Cole-Hersee Co., Boston, Mass., now has available for immediate delivery its low air pressure warning kit. This unit was developed to meet new ICC Regulation S193.51 which requires all trucks and busses with air brake equipment to have an audible or visible warning signal to indicate lack of air pressure to stop the vehicle. When air pressure falls below the safety point of 60 lbs, the flashing red light unmistakably calls the driver's attention to the lack of pressure. It consists of a dash unit and a pressure switch which is easily inserted in the line.

The latest developments in parts, accessories, equipment and tools for the fleet shop

CIRCLE APPROPRIATE NUMBERS ON POSTCARD FOR MORE INFORMATION



P7. Small Lift Truck

"Handy-Hoister," a small lift truck for moving out-of-order assemblies to and from vehicles and repair areas has been announced by Lewis-Shepard, Watertown, Mass. Two models are available. The 500-lb capacity model has a standard platform size of 24 by 24 in. Overall height is 71 in. and length is 35 $\frac{1}{4}$ in. The 1000-lb model has a standard platform size of 30 by 24 in., and is 76 in. high and 42 $\frac{1}{2}$ in. in length.

P8. Night Driving Glasses

New type sun glasses, said to eliminate glare, are available from Viking Sloane Corp., New York, N. Y. These gold-rimmed glasses equipped with Rayex lenses cut out the blinding effect of headlight glare, outline lights as pale amber discs. Regular or clip-on types are available.

P9. Nylon Wiper Motor

Sprague Devices, Inc., Michigan City, Ind., is now manufacturing a new windshield wiper motor for heavy trucks, fabricated from DuPont nylon. No springs are used. The only steel parts are the screws and stainless steel shaft. There are only three moving parts. Other features of the motor include "O" ring construction in valve and piston, high torque output and choice of right or left hand over-ride parking. The unit operates on 5 to 120 psi.



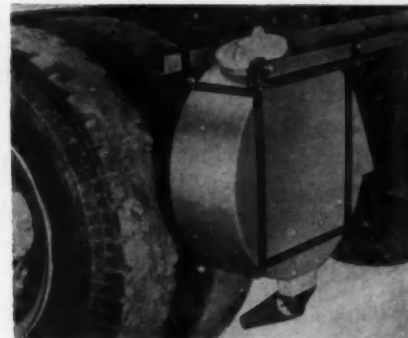
P10. Breakaway Valves

Burdick Bros., Inc., Gardena, Cal., now have the Series No. 5300 automatic breakaway valves. This series makes it possible for the operator to retain all the air on the truck or tractor in case of disconnection or breakaway of the trailer, or a broken service or emergency line. No piping is necessary to cab. The valves are installed at the end of air lines on truck or tractor. The valves, being fully automatic, eliminates human error in case of an emergency. Most important, it will not allow a driver to fan or pump the unit below 60 pounds of air without setting the brakes, thus eliminating runaways to a minimum. These valves fully comply with the new ICC and State regulations pertaining to valves for the retention of air on the power unit in case of breakaways.

P11. Trouble Light



A small roadside trouble light that plugs into the lighter is available from Alden Systems Co., Westboro, Mass. Other connector adapters are available. The light is enclosed in a 4 in. in dia by 3 in. high container with 17 ft of cord that fits on a reel in the base of the light. In use, by lifting the lid, it shines a continuous white light to the front and a blinking red signal to the rear. A special clip provides for connecting two or more through the same lighter plug.



P12. Power Sander

A new heavy duty power sander is now being marketed by Anderson Machine and Tool Works, Inc., Chaska, Minn. Special features include dash-mounted control switches, heavy duty rotary fan to blast and spread grit under wheels and machine gun acting solenoid to meter grit. Shock-vibration proof mounting brackets make it easy to install.

P13. Brake Shoe Tools

A new, line of brake shoe bonding equipment is being introduced by Bondomatic Corp., Los Angeles, Calif. Basically the equipment consists of (1) the "Bondomatic" assembler, featuring a power-driven winch clamp said to automatically clamp shoes at the same pressure every time, (2) the "Bondomatic Senior," a 1500-shoe per day infra-red or forced-air gas oven, and (3) the "Bondomatic Junior," a 200-shoe per day infra-red oven. The winch clamp consists of a band of non-corroding stainless steel fastened to a motor-driven reel on one end of the clamp. The band fits around the lining and shoe and hooks to the other end of the clamp. The motor-driven reel, controlled by a gage, then applies accurate, uniform pressure to the shoe. No springs, bolts or wrenches are needed and one clamp handles all shoe sizes from 1 $\frac{3}{4}$ through 2 $\frac{1}{2}$ -in. widths. Clamp is operated by a foot pedal switch.

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New Product Descriptions

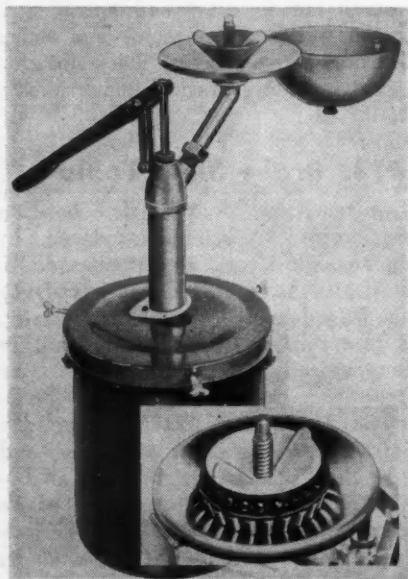
Continued from Page 91

P14. Parts Cleaner

A new air-operated "jet action" parts cleaner is said to reduce time required for cleaning carburetors, fuel pumps, pistons, brake shoes, and other automotive parts. Just announced by Jiffy Parts Cleaner, Los Angeles, Cal., it uses compressed air at any available pressure above 45 lb to create a turbulence which produces an effective mechanical cleansing action to the detergent properties of any commonly used solvent. It features a five-jet agitator unit with 12 ports which admit compressed air in such a way as to set up a turbulence pattern which activates the entire volume of solvent in the tank. Unit is housed in a heavy steel tank of six and one-half gal capacity. A heavy-duty parts basket is equipped with a locking hook which grips the lip of the tank, allowing both for easy loading and effortless draining of cleaned parts.

P15. Bearing Packer

A new heavy duty bearing packer that operates in original grease containers has been announced by Gray Company, Inc., Minneapolis, Minn. De-



signed to handle all bearings from $\frac{3}{4}$ in. ID to $7\frac{1}{2}$ in. OD (small end). Pressure screw tightens fast by finger pressure—holds bearing in place. Hand-operated pump instantly supplies a large volume of grease—literally "pops" through to flush out dirt and provide even grease pressure throughout the bearing. Follow plate assures constant grease supply.

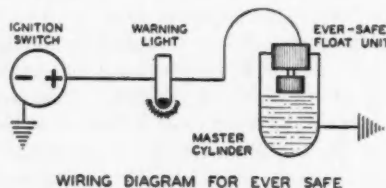
P16. Cam-Action Saw

A cam-action saw attachment has been developed by the E-Z Way Tool Co., Barrington, Ill., to convert the rotary power of an electric drill to a thrust-action saw, eliminating the use of gears. The new tool can be attached directly to any heavy duty electric drill for fast cutting of metal. Each revolution of the power drill is turned into a $\frac{7}{8}$ -in. stroke by the cam action of the saw. Specially-designed blades make starting holes unnecessary, but the universal chuck also permits the use of any make of hack or keyhole saw blade.



P17. Brake Fluid Indicator

Automotive Division, Wagner Electric Corp., St. Louis, Mo., announces a new automotive brake product, the "Ever Safe" brake fluid level indicator.



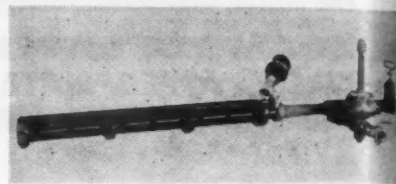
It forewarns the driver of low brake fluid supply by means of warning light mounted on the dash, and connected to a float unit switch easily installed in the vehicle's master brake cylinder. The float unit simply replaces the master cylinder filler cap and is connected to the electric current supply and warning light.

P18. Steam Cleaner

Two manufacturers have combined their engineering skill to develop equipment featuring both the "Speedyelectric" steam-jet and the "Sellers Injector Hydraulic Jet." Announced by Livingstone Engineering Co., Worcester, Mass. The new "Speedyelectric Hydrosteam" is available in both stationary and portable models. The built-in Sellers hydraulic unit provides a solid jet of superheated water and detergent, propelled under extremely high discharge pressure and temperature. The "Hydrosteam Jet Cleaner" is available for operation on 220, 440 or 550 volt, 3 phase or 2 phase, 60 or 25 cycle power supply.

P19. Line Burner

A new product now in production at Eclipse Fuel Engineering Co., Rockford, Ill., is a gas-fired retention-type line burner for applications where heat must be distributed over a wide area by a continuous flame, including make-up air systems for spray booths and hot-



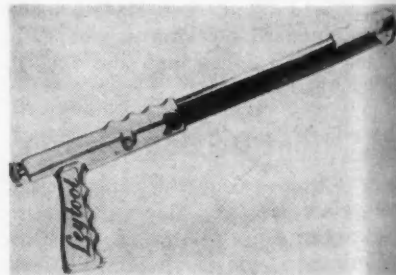
dip cleaning tanks. The burners may be installed to fire in any direction: horizontally, vertically or downward.

P20. Electric Welder

New moving coil transformer type industrial welder manufactured by Miller Electric Mfg. Co., Appleton, Wis., is designated as Model No. 99. It has a rated output of 250 amp at 30 arc volts with a top usable output of 350 amp.

P21. "Endless" Hacksaw

New "Endless" hacksaw, announced by Alpha Tool and Supply Co., Closter, N. J., is especially designed so the operator can saw through an unlimited amount of material without being restricted by the frame. This new tool consists of a spring-loaded plunger with a comfortable pistol grip handle,



and a guide tube which supports the regular 10 or 12-in. hacksaw blade. The blade rides on three hardened steel balls in the front casing of the guide tube. After sawing to a depth equal to the width of the blade, a knurled locking screw is loosened. The front casing of the guide tube then remains at the point of contact of the blade and the work. The blade is now actuated by the spring-loaded plunger, and is not restricted to the depth of cut. Pressure is needed on the forward stroke only as the powerful internal spring makes the return stroke automatic, reducing fatigue and consequently costly man hours.

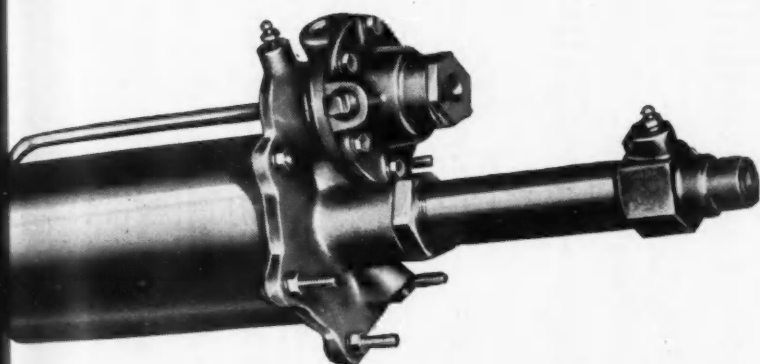
(TURN TO PAGE 130, PLEASE)

Bendix

AIR-PAK

offers the advantages of two
braking systems in one unit

... air power plus hydraulic actuation



With Bendix* AIR-PAK you get faster brake action and more positive control, for here in a single, compact easy-to-install power braking unit are combined the well proven advantages of hydraulic brake action with an air brake system.

Bendix AIR-PAK changes air pressure into hydraulic pressure by means of two directly connected pistons. Thus, a non-compressible column of brake fluid instead of air connects between the driver's foot and the brake shoe. If in an emergency situation air pressure fails for any reason, or if braking is required before air pressure builds up, brakes can be applied instantly by foot power alone.

AIR-PAK is the product of Bendix—world's largest producer of power brakes and builder of Hydrovac®, the world's most widely used power brake with *over three million units in use*.

For truck manufacturers or operators interested in AIR-PAK, a descriptive folder is available on request.

*REG. U.S. PAT. OFF.

THE MOST TRUSTED NAME IN BRAKING

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Bendix
AVIATION CORPORATION



Bendix
Products
Division

1953 New Truck Registrations by Makes by States*

| STATE AND MONTH | Auto-car | Brook-way | Chevrolet | Diamond T | Divco | Dodge | Federal | Ford | FWD | GMC | International | Ken-worth | Mack | Peter-bilt | Pontiac | Reo | Stude-baker | White | Willlys | All Others | Total | |
|-------------------|----------|-----------|-----------|-----------|-------|-------|---------|------|------|------|---------------|-----------|------|------------|---------|-----|-------------|-------|---------|------------|--------|--------|
| Alabama | May | | 654 | 1 | 2 | 127 | | 425 | | 198 | 96 | 1 | 10 | | | 1 | 37 | 26 | 14 | | 1,583 | |
| May | 12 | 1 | 3497 | 10 | 5 | 787 | 7 | 2006 | | 935 | 544 | 1 | 71 | | | 21 | 207 | 101 | 78 | | 8,263 | |
| Arizona | May | | 251 | | 1 | 54 | | 167 | | 78 | 64 | 3 | 2 | | | 8 | 20 | 6 | 30 | | 686 | |
| May | | | 1101 | 4 | 4 | 299 | | 719 | | 384 | 320 | 13 | 24 | | | 27 | 117 | 32 | 89 | | 3,114 | |
| Arkansas | May | 2 | 332 | | | 50 | | 249 | | 120 | 74 | | 1 | | | | 29 | 6 | 9 | | 873 | |
| May | 2 | | 3091 | 2 | | 578 | 3 | 2053 | | 1042 | 625 | | 2 | | | | 9 | 34 | 90 | | 7,779 | |
| California | May | 11 | 2001 | 29 | 9 | 519 | 2 | 1307 | 2 | 593 | 472 | 11 | 18 | | | 29 | 130 | 49 | 138 | 10 | 5,332 | |
| May | 85 | 2 | 10897 | 145 | 76 | 3762 | 4 | 6425 | 7 | 3410 | 2818 | 91 | 106 | 10 | 20 | 117 | 929 | 208 | 877 | 70 | 39,039 | |
| Colorado | May | 5 | 321 | 11 | 1 | 93 | | 260 | 1 | 85 | 159 | 1 | 7 | | | 3 | 21 | 9 | 40 | | 1,017 | |
| May | 18 | | 1736 | 59 | 11 | 401 | 5 | 1210 | 10 | 514 | 661 | 7 | 17 | 6 | | 16 | 150 | 27 | 195 | | 5,043 | |
| Connecticut | May | 8 | 1 | | | 72 | | 171 | | 77 | 72 | | 9 | | | 6 | 31 | 16 | 25 | | 787 | |
| May | 14 | 17 | 1061 | 33 | 40 | 380 | 19 | 735 | | 282 | 342 | 1 | 58 | | | 31 | 117 | 123 | 106 | 3 | 3,383 | |
| Delaware | May | 2 | 3 | | | 28 | | 74 | | 14 | 36 | | | | | | 12 | 3 | 1 | | 302 | |
| May | 4 | 5 | 632 | 3 | | 127 | 5 | 286 | | 80 | 144 | | 8 | | | 6 | 43 | 7 | 11 | | 1,263 | |
| Dist. of Columbia | May | 1 | 91 | | 2 | 56 | | 33 | | 27 | 21 | | | | | 1 | 2 | 1 | 4 | | 239 | |
| May | 3 | 1 | 384 | 13 | 15 | 327 | 1 | 198 | | 158 | 105 | | 8 | | | 12 | 5 | 5 | 14 | | 1,236 | |
| Florida | May | 2 | | | 5 | 4 | | 608 | | 239 | 141 | | 51 | | | 5 | 81 | 40 | 117 | 2 | 2,263 | |
| May | 14 | | 3790 | 29 | 25 | 1117 | 10 | 2515 | | 1021 | 880 | | 201 | | | 57 | 484 | 141 | 367 | 12 | 10,686 | |
| Georgia | May | 2 | 1476 | 4 | | 305 | | 1121 | | 320 | 296 | | 18 | | | 7 | 148 | 20 | 26 | 1 | 3,749 | |
| May | 7 | 1 | 4064 | 15 | 10 | 1022 | | 2547 | | 1090 | 919 | | 59 | | | 21 | 417 | 94 | 82 | 2 | 10,333 | |
| Idaho | May | | 185 | | | 55 | | 141 | 1 | 72 | 100 | 4 | 1 | | | 6 | 27 | 3 | 46 | | 641 | |
| May | 7 | | 1041 | 10 | 2 | 312 | 1 | 731 | 2 | 431 | 533 | 18 | 29 | 7 | | 6 | 133 | 10 | 226 | 6 | 3,500 | |
| Illinois | May | 19 | 1415 | 34 | 7 | 368 | 1 | 1079 | | 336 | 604 | 1 | 19 | | | 2 | 115 | 59 | 42 | 5 | 4,067 | |
| May | 3 | | 7229 | 189 | 49 | 2229 | 5 | 4933 | 1 | 1603 | 3016 | 1 | 64 | | | 55 | 587 | 314 | 298 | 48 | 26,673 | |
| Indiana | May | 9 | 943 | 11 | | 231 | 4 | 698 | | 200 | 368 | | 34 | | | 12 | 105 | 74 | 23 | 3 | 2,714 | |
| May | 1 | | 3555 | 42 | 28 | 1105 | 7 | 2284 | 1 | 890 | 1578 | | 66 | | | 49 | 471 | 257 | 158 | 16 | 16,589 | |
| Iowa | May | 3 | 636 | 7 | | 134 | | 621 | | 96 | 237 | | 2 | | | 6 | 35 | 13 | 19 | | 1,815 | |
| May | 3 | | 3098 | 35 | 14 | 646 | 1 | 2491 | 6 | 554 | 1510 | 3 | 19 | | | 26 | 226 | 80 | 103 | 17 | 8,837 | |
| Kansas | May | 1 | 965 | 9 | | 219 | | 595 | | 223 | 264 | | 5 | | | 4 | 60 | 7 | 31 | | 2,280 | |
| May | 1 | | 3347 | 22 | 8 | 578 | | 2080 | | 891 | 1176 | | 8 | | | 10 | 238 | 62 | 146 | 2 | 8,862 | |
| Kentucky | May | 1 | 642 | 2 | | 119 | 1 | 538 | | 154 | 154 | | 2 | | | 3 | 56 | 13 | 13 | | 1,599 | |
| May | 1 | | 3092 | 9 | 9 | 611 | 9 | 1862 | | 750 | 788 | | 23 | | | 17 | 235 | 45 | 170 | | 7,823 | |
| Louisiana | May | 1 | 684 | 2 | | 116 | | 494 | | 150 | 142 | | 1 | | | 5 | 17 | 44 | 6 | 18 | 1,962 | |
| May | 8 | | 3377 | 13 | 10 | 713 | 1 | 2205 | | 862 | 671 | | 26 | | | 6 | 332 | 32 | 119 | 1 | 8,579 | |
| Maine | May | 4 | 2 | | | 50 | | 133 | | 49 | 60 | | 14 | | | 1 | 22 | 4 | 33 | | 945 | |
| May | 2 | 5 | 793 | 16 | 5 | 251 | | 593 | 1 | 281 | 274 | | 45 | | | 8 | 113 | 17 | 117 | 6 | 2,337 | |
| Maryland | May | 9 | 13 | | | 127 | 2 | 315 | | 104 | 118 | | 10 | | | 5 | 25 | 20 | 11 | 1 | 1,152 | |
| May | 7 | 39 | 1717 | 10 | 16 | 734 | 7 | 1200 | 2 | 396 | 510 | | 78 | | | 23 | 116 | 94 | 69 | 2 | 5,021 | |
| Massachusetts | May | 12 | 7 | | | 122 | 1 | 308 | | 86 | 130 | | 18 | | | 13 | 46 | 34 | 36 | 3 | 1,232 | |
| May | 49 | 39 | 1642 | 35 | 49 | 573 | 11 | 1140 | 1 | 370 | 479 | | 117 | | | 63 | 197 | 117 | 149 | 7 | 5,039 | |
| Michigan | May | 11 | 1456 | 18 | 40 | 348 | 7 | 1189 | | 372 | 208 | | 14 | | | 23 | 71 | 27 | 37 | 1 | 3,824 | |
| May | 28 | 1 | 6541 | 70 | 108 | 2069 | 77 | 4465 | 1 | 1515 | 1160 | | 49 | | | 112 | 263 | 128 | 177 | 7 | 16,799 | |
| Minnesota | May | 8 | 692 | 8 | | 193 | | 597 | | 179 | 388 | | 10 | | | 2 | 89 | 20 | 23 | 4 | 2,229 | |
| May | 8 | | 3012 | 27 | 20 | 613 | 13 | 2303 | 13 | 628 | 1301 | | 6 | | | 35 | 270 | 55 | 132 | 6 | 8,694 | |
| Mississippi | May | | 489 | | | 93 | | 317 | | 141 | 121 | | 5 | | | 1 | 30 | 4 | 6 | | 1,286 | |
| May | 3 | | 2880 | | | 539 | | 1741 | | 944 | 585 | | 12 | | | 1 | 205 | 19 | 74 | | 7,112 | |
| Missouri | May | 7 | 1215 | 15 | 34 | 181 | | 704 | | 276 | 310 | | 20 | | | 4 | 81 | 55 | 74 | | 2,988 | |
| May | 3 | | 5084 | 18 | 46 | 1056 | | 2991 | | 1350 | 1253 | | 20 | | | 31 | 347 | 162 | 134 | 1 | 12,981 | |
| Montana | May | 1 | 206 | | | 23 | | 144 | | 45 | 78 | | 3 | | | 1 | 20 | 23 | 1 | | 549 | |
| May | 1 | | 1101 | 3 | 1 | 190 | 1 | 812 | | 263 | 494 | 16 | 14 | | | 8 | 118 | 20 | 206 | 7 | 3,367 | |
| Nebraska | May | 11 | 370 | 19 | | 57 | | 1606 | | 98 | 165 | | 2 | | | 3 | 17 | 3 | 25 | 4 | 1,980 | |
| May | 11 | | 2113 | 55 | 5 | 339 | | 1806 | 4 | 512 | 978 | 11 | 16 | | | 5 | 162 | 47 | 199 | 14 | 8,083 | |
| Nevada | May | | 70 | 1 | | 37 | | 53 | | 31 | 9 | | 1 | | | 1 | 8 | | 21 | | 233 | |
| May | | | 290 | 1 | | 143 | | 198 | | 131 | 71 | | 1 | | | 1 | 59 | 2 | 58 | | 1,226 | |
| New Hampshire | May | 2 | 129 | 1 | | 34 | | 99 | | 28 | 35 | | 2 | | | 5 | 11 | 1 | 25 | 1 | 374 | |
| May | 1 | 6 | 436 | 2 | 4 | 114 | | 277 | | 104 | 112 | | 25 | | | 14 | 46 | 6 | 78 | 1 | 1,236 | |
| New Jersey | May | 5 | 47 | | | 191 | | 678 | | 188 | 201 | | 21 | | | 7 | 56 | 85 | 36 | 1 | 2,236 | |
| May | 34 | 140 | 3407 | 39 | 67 | 949 | 33 | 2702 | 5 | 907 | 946 | | 135 | | | 40 | 236 | 309 | 146 | 4 | 16,106 | |
| New Mexico | May | | 355 | 8 | | 35 | 4 | 258 | | 63 | 73 | | 2 | | | 1 | 4 | 26 | 6 | 20 | 861 | |
| May | 43 | 59 | 1275 | 46 | 14 | 821 | 12 | 1077 | 3 | 338 | 604 | | 74 | | | 54 | 93 | 90 | 55 | 6 | 4,385 | |
| New York | May | 131 | 346 | 137 | 53 | 2687 | 40 | 4344 | 12 | 1623 | 2285 | | 380 | | | 13 | 196 | 392 | 370 | 463 | 61 | 19,634 |
| North Carolina | May | | 886 | 1 | | 165 | | 622 | | 210 | 185 | | 31 | | | 5 | 13 | 350 | 207 | 173 | 5 | 10,940 |
| May | 11 | | 4153 | 9 | 25 | 920 | 1 | 2671 | 1 | 1121 | 1027 | | 151 | | | 13 | 350 | 207 | 173 | 5 | 10,940 | |
| North Dakota | May | | 141 | | | 28 | | 161 | | 30 | 79 | | | | | | 9 | | | | 494 | |
| May | 1 | | 698 | 1 | | 179 | | 822 | | 167 | 525 | | 5 | | | 1 | 68 | 8 | 36 | 3 | 2,511 | |
| Ohio | May | 10 | 2 | 1140 | 14 | 15 | 339 | 6 | 1072 | 1 | 264 | 469 | | 32 | | | 27 | 80 | 75 | 88 | 4 | 3,940 |
| May | 57 | 8 | 6008 | 68 | 75 | 2224 | 47 | 4229 | 8 | 1287 | 2399 | | 155 | | | 11 | 150 | 450 | 471 | 321 | 19 | 17,967 |
| Oklahoma | May | | 767 | 1 | | 125 | | 568 | | 278 | 199 | | 2 | | | 1 | 3 | 48 | 25 | 15 | | 2,038 |
| May | 3 | | 3732 | 4 | 15 | 667 | | 2482 | 12 | 1108 | 1020 | 3 | 14 | | | 19 | 280 | 98 | 87 | | 9,835 | |
| Oregon | May | 2 | 371 | 10 | | 135 | 1 | 401 | 2 | 165 | 199 | | 5 | | | 23 | 126 | 13 | 69 | | 1,429 | |
| May | 12 | | 1688 | 41 | 8 | 619 | 2 | 1554 | 4 | 647 | 819 | 45 | 65 | 29 | | 3 | 23 | 135 | 68 | 376 | 5 | 6,145 |
| Pennsylvania | May | 16 | 47 | 1353 | 20 | 20 | 460 | 4 | 972 | 298 | 503 | | 31 | | | 2 | 20 | 90 | 95 | 66 | 7 | 4,806 |
| May | 78 | 237 | 6165 | 82 | 62 | 2455 | 31 | 4074 | 1 | 1366 | 2445 | | 255 | | | 11 | 126 | 404 | 379 | 340 | 18 | 16,529 |
| Rhode Island | May | 5 | 85 | 2 | 3 | 32 | | 64 | | 15 | 67 | | 1 | | | | 10 | 44 | 15 | 13 | | 294 |
| May | 24 | 2 | 342 | 9 | 10 | 144 | | 269 | 4 | 61 | 138 | | 15 | | | | 24 | 15 | 5 | 1 | 1,109 | |
| South Carolina | May | | 426 | | | 90 | | 292 | | 116 | 68 | | 5 | | | | 157 | 42 | 44 | 4 | 1,042 | |
| May | 1 | | 2210 | 2 | 1 | 434 | | 1294 | | 510 | 353 | | 16 | | | 2 | 11 | 1 | 17 | 1 | 5,076 | |
| South Dakota | May | | 181 | 17 | | 50 | | 134 | | 46 | 148 | | | | | 1 | 11 | 1 | 17 | 1 | 667 | |
| May | | | 759 | 22 | 1 | 214 | 1 | 584 | | 205 | 545 | 1 | | | | 3 | 2 | 80 | 9 | 117 | 1 | 2,544 |
| Tennessee | May | | 638 | 2 | | 129 | | 470 | | 171 | 122 | | 6 | | | 2 | 1 | 34 | 17 | 19 | | 1,612 |
| May | 1 | 6 | 3942 | 14 | 7 | 989 | 16 | 2344 | | 1035 | 932 | | 53 | | | 20 | 251 | 85 | 113 | | 8,819 | |
| Texas | May | 15 | 2961 | 15 | 5 | 397 | | 1956 | 1 | 523 | 624 | | 31 | | | 3 | 9 | 176 | 124 | 58 | 1 | 6,821 |
| May | 61 | | | | | | | | | | | | | | | | | | | | | |

CCJ's Truck Specifications

COMPILED FROM DATA SUPPLIED EACH MONTH BY MANUFACTURERS

KEY TO DEFINITIONS

MAKE AND MODEL

Only Domestic Truck Models are listed.

OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are

those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the

weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO ABBREVIATIONS

MAKES—ALL

B—Bendix.
BL—Brown-Lipe.
Bu or Bud—Buda.
BW—Bendix-Westinghouse.
C—Chevrolet.
Cl or Cls—Clark.
Co—Continental.
Cum—Cummins-Diesel.
E—Eaton.
F—Ford.
Fu—Fuller.
G—Goodyear-Hawley type.
H—Hotchkiss.
Her—Hercules.
HS—Hall-Scott.
Int—International Harvester.
L—Lockheed.
LeR—LeRoi.
LH—Lockheed front, Wagner "hi-Tork" rear.
LT—Lockheed type front, Timken rear.
LW—Lockheed front, Wisconsin rear.
M—Midland.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional.
Sh—Shuler.
Spi—Spicer.
T or Tim—Timken-Detroit Axle Co.

Tw—Timken-Detroit—Westinghouse.
TW—Timken-Detroit—Wisconsin.
Var—Variable.
WQ—Warner Gear.
Wau—Waukesha.
W or Wis—Wisconsin.
Wg—Wagner "hi-Tork."
Ws—Westinghouse.
WW—Westinghouse or Wagner

WHEELS DRIVEN
2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group.
4R—Forward and rear units of Rear Axle Group.
4—All wheels.

BRAKES—SERVICE
Location
4—Four Wheels, front and rear.
4r—Four Wheels, rear only.

Type
I—Internal.
X—External.
Operation
A—Air.
H—Hydraulic.

V—Vacuum.
D or Dp—Dual Primary.

BRAKES—HAND

Location
C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
6—Six wheels.
P—Back of Power Divider.
J—Jackshaft.
T—Transmission.
F—Driveshaft.

Type
D—Tru-Stop disk.
I—Internal.
M—Mechanical.
X—External.
PD—Two drums on rear of power divider.
F—Mechanical, foot operated

BRAKE DRUMS
Material
a—Cast alloy iron.
A—American Car Foundry.
c—Cast iron.
Co—Composite Front, Cast Iron in rear.

Ce—Centrifuge.
CI—Copper iron.
Co—Composite.
D—Dayton.
E—Ermalite.
G—Cumite.
N—Nickel iron.
S—Steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME

Type
C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and subplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center.
Tt—Tapered front.
A—Straight section side members, lined with oak inserts.

Z—Reinforced (X) member frame, box type sections.
BQ—Box girder.

REAR AXLE

Final Drive and Type

R—Revel.
CD—Chain Drive.
F—Full-floating.
H or Hy—Hypoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel.
W—Worm.
3/4—Three Quarters Floating.
1/2—Semi-floating.
T—Torque Tube.

GEAR RATIOS

(**) Only one ratio.

Drive and Torque

H—Hotchkiss (springs).
R—Radius Rods.
L—Parallel Torque Rods.
T—Torque Arm.

GOVERNOR STANDARD

Y—Yes.
N—No.

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-Over-Engine design.

(D)—Diesel-engine equipped.
(T)—Designed for tractor use only.

(C)—Ford or Chevrolet Models.
(R)—Remanufactured Fords.

A—Denotes "Includes Cab" when used with weights or prices.

BROWN

All six engines listed are available on all five models of trucks.
Steel frame only. Also available with Aluminum frame 10x3 1/2 x 1/2.
Many variations available with Fuller or Spicer transmissions.

CHEVROLET

Includes spare tire, full fuel tank and cooling system.
5.50/20 can be used on the front with no decrease in G.V.W. when 8.25/20 are used on dual rear wheels.

Own Loadmaster engine available at extra cost.
8.25/20 front tires are required when 9.00/20 dual rears are used.

Diameter: (Average) Front, 2.6858; Front Center, 2.7168; Rear Center,

2.7478; Rear, 2.7788. Total Length 5 ft.

4 speed transmission available.

Also available in 5.14 ratio. 5.43 available.

Two speed axle available. 8 1/2 x 2 1/4 x 1/4 is used with heavy-duty equipment.

F.C.—Forward control chassis for door-to-door delivery bodies. These chassis do not have cowl.

CORBITT

Available with optional tires and axles for less G.V.W. rating.
Also available with Cummins HRB600 and NHB-600.

DODGE

Front only: Rear 7.00/168.
Front only: Rear 8.25/168.
Front only: Rear 7.50/20.
Front only: Rear 9.00/20.
Front only: Rear 10.00/20.
Rear of transfer case.

Truck - O - Matic transmission available.

Twin carburetion.

Two speed rear axle available.

DUPLEX

Torque Divider, Timken T70-2 speed.

FEDERAL

Diesel engine obtainable.
Five speed transmission obtainable.

Auxiliary transmission Spicer 6231B with 3 forward speeds.

Auxiliary transmission Spicer 8031.

5501, 6001 and 6501 have single speed, double reduction rear axle.

Radius rods obtainable.

For wheelbases below 196" - 9 x 3 x 1/4.

For shorter wheelbases, 10 x 3 1/4 x 1/4.

Diesel engine obtainable.

Overdrive optional.

Torque Divider Timken T70-2 speed, T50 obtainable.

SW3020, SD3020 obtainable.

SW3020 obtainable.

Rear only.

With R series rear axle, reduce G.V.W. by 4000 lbs.

FORD

Front only: rear, 8.25/188.

FWD

Four wheel steering.

KENWORTH

Timken T13129 PA Tra

14.00/24, front; 16.00/24, rear.

OSHKOSH

Includes cab.
1091 cu. in.
Hydraulic coupling.

Other Cummins 6 cylinder engines optional.

Includes cab and dual tires on front, center and rear axles.

Dependent upon engine.

REO

Model 331-OA and 331-OA LPG engines can be furnished.

Two speed axle available.

Double reduction and 2 speed available.

Buda 6DTS-468 diesel engine available.

Model 255-OA-LPG engine can be furnished.

Front only: rear, 10.00/20.

OH-160 engine can be furnished.

STERLING

Rear only: Front 11.00/24.

Rear only: Front 11.00/22.

Own EJ three speed auxiliary transmission furnished.

Timken T70 two speed torque divider furnished.

Parking brake at rear of auxiliary transmission.

Rear only: Front 12.00/24.

Rear only: Front 14.00/24.

Rear only: Front 16.00/24.

1125 cu. in.

Own model FJ three speed auxiliary transmission furnished.

Timken T76 two speed transfer case furnished.

Timken T77 two speed transfer case furnished.

Parking brake at rear of transfer case.

Tapered, 9 x 7 x 3 1/4 x 1/4.

Also available with Cummins Diesel engine and appropriate transmission.

STUDEBAKER

Two speed 6.13-8.10 and H.D. 6.20 or 6.80 optional.

Two speed 6.13-8.10 optional.

TRUCKSTELL

Single front, dual rear.

With 3 speed power divider.

Weight with cab and maximum tires.

Including slip-over reinforcing frame channels.

Air brake optional.

WARD LA FRANCE

Available with optional rear axles.

Available with 11.00/22 or 12.00/20 tires for G.V.W. of 60,000 lbs and optional front and rear axles.

Auxiliary transmission Fuller 3A65, 3B65, 3A92 and 3B92.

WILLYS

Complete vehicle-Pick-up Type body.

Three speed transmission, 2 speed transfer case.

Or Spicer 53-2 at discretion of manufacturer only.

Complete Vehicle.

(Turn to Next Page, Please)

(Continued from Page 97)

| Line Number | MAKE AND MODEL | Chassis List Price | WHEEL-BASE | | Gross Vehicle Weight (See definition) | TIRE SIZES | | ENGINE DETAILS | | | | TRANSMISSION | | REAR AXLE | | FRONT AXLE | BRAKES | | | | FRAME | | | | | | | | |
|-------------|----------------|--------------------|------------------|------------------|---------------------------------------|-------------------------|-------------------------|------------------|--------|--------------|-------------|----------------|---------------------------|------------------------------------|-------------------|---------------|----------------|----------------|---------------------|----------------|-----------|---------|-----------|---------------|---------------|------|----------------------------------|----------------------|------|
| | | | Minimum Standard | Maximum Standard | | Standard Front and Rear | Dual rear S-single rear | No. of Cylinders | Stroke | Displacement | Comp. Ratio | Torque lb. ft. | Max. Brake H.P. at R.P.M. | Number and Length of Main Bearings | Governor Standard | | Make and Model | Clear and Type | Clear Ratio in High | Make and Model | Operation | Linking | Drum Area | Drum Material | Hand Location | Type | C-A Dimensions (Min. Std. W. B.) | Side Rail Dimensions | Type |
| 1 | Available | 200 | | | 15000 | 7.00/20 | 8.25/20 | 6-34x4 | 4 | 263.5 | 9.175 | 78-2800 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 2 | (c.o.e.) | 225 | | | 16500 | 7.50/20 | 8.25/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 3 | (c.o.e.) | 250 | | | 18000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 4 | (c.o.e.) | 275 | | | 20000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 5 | (c.o.e.) | 300 | | | 22000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 6 | (c.o.e.) | 325 | | | 24000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 7 | (c.o.e.) | 350 | | | 26000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 8 | (c.o.e.) | 375 | | | 28000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 9 | (c.o.e.) | 400 | | | 30000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 10 | (c.o.e.) | 425 | | | 32000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 11 | (c.o.e.) | 450 | | | 34000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 12 | (c.o.e.) | 475 | | | 36000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 13 | (c.o.e.) | 500 | | | 38000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 14 | (c.o.e.) | 525 | | | 40000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 15 | (c.o.e.) | 550 | | | 42000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 16 | (c.o.e.) | 575 | | | 44000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 17 | (c.o.e.) | 600 | | | 46000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 18 | (c.o.e.) | 625 | | | 48000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 19 | (c.o.e.) | 650 | | | 50000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 20 | (c.o.e.) | 675 | | | 52000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 21 | (c.o.e.) | 700 | | | 54000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 22 | (c.o.e.) | 725 | | | 56000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 23 | (c.o.e.) | 750 | | | 58000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 24 | (c.o.e.) | 775 | | | 60000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 25 | (c.o.e.) | 800 | | | 62000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 26 | (c.o.e.) | 825 | | | 64000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 27 | (c.o.e.) | 850 | | | 66000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 28 | (c.o.e.) | 875 | | | 68000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 29 | (c.o.e.) | 900 | | | 70000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 30 | (c.o.e.) | 925 | | | 72000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 31 | (c.o.e.) | 950 | | | 74000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 32 | (c.o.e.) | 975 | | | 76000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 33 | (c.o.e.) | 1000 | | | 78000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 34 | (c.o.e.) | 1025 | | | 80000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 35 | (c.o.e.) | 1050 | | | 82000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 36 | (c.o.e.) | 1075 | | | 84000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | 320.5 | 9.235 | 105-3200 | 7-1/2x10 | 2 | NWG T9 | 4-Tim E100DPH | H | 220 | 6-20 | 32502H | L41HV | 314 | 534 | 314 | 534 | TX | 60 | 10x3x4 | 1 |
| 37 | (c.o.e.) | 1100 | | | 86000 | 8.25/20 | 9.00/20 | 6-34x4 | 4 | | | | | | | | | | | | | | | | | | | | |

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1888
DEPENDABLE BATTERIES FOR 65 YEARS
1953

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 2 • Exide Batteries of Canada, Limited, Toronto

Continued from Page 98

| Line Number | MAKE AND MODEL | WHEEL-BASE | | TIRE SIZES | | ENGINE DETAILS | | | | TRANS-MISSION | | REAR AXLE | | FRONT AXLE | BRAKES | | C-A Dimensions (Min. Std. W. B.) | | FRAME | | |
|-------------|----------------|------------------|---|--|----------------------------|-----------------------------|--------------|-------------|---------------------------|--------------------------------------|-------------------|----------------|----------------|------------|-------------------|----------------|----------------------------------|---------------|-------|-----------|--------------------|
| | | Minimum Standard | Gross Vehicle Weight for Normal Service | Standard Front and Rear (See definition) | D-single rear (less noted) | No. of Cylinders and Stroke | Displacement | Comp. Ratio | Max. Brake H.P. at R.P.M. | Number and Diameter of Main Bearings | Governor Standard | Make and Model | Make and Model | | Clearance in Hips | Model and Make | Location Type | Limiting Area | | Drum Area | Hand Location Type |
| 1 | Dodge—Cont'd | 128 | 17000 | 4500/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8225-120-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 2 | B-4-JA | 133 | 17500 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 3 | B-4-JAL | 161 | 17500 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 4 | B-4-JMA | 234 | 17500 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 5 | B-4-JMA | 234 | 17500 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 6 | B-4-KA | 208 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 7 | B-4-KA | 208 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 8 | B-4-KA | 208 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 9 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 10 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 11 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 12 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 13 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 14 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 15 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 16 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 17 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 18 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 19 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 20 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 21 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 22 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 23 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 24 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 25 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 26 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 27 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 28 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 29 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 30 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 31 | B-4-KMA | 3128 | 17000 | 4400/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 32 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 33 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 34 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 35 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 36 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 37 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 38 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 39 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 40 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 41 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 42 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 43 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 44 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 45 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 46 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 47 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 48 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 49 | Federal | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 50 | Ford Courier | 1801 | 19000 | 4700/6.50/20 | 9.00/20 | 6-3 | 265x164 | 9.8 | 8216-114-36000 | 4-7/16x5.0 | NP-89410 | 5EAT A5-1350 | 5EAT A5-1350 | H 53-6 | Owa T-318 | OAIHV | 432 | 6046 | TX | 60 | 42x18.5 |
| 51 | Ford Courier | 1801 | 190 | | | | | | | | | | | | | | | | | | |

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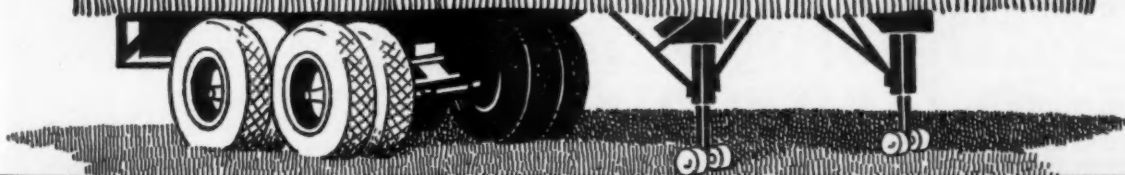
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KINGHAM TRAILER COMPANY, INC. LOUISVILLE 10, KY.

COMMERCIAL CAR JOURNAL, August, 1953

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(Continued from Page 100)

| Line Number | MAKE AND MODEL | WHEEL-BASE | | TIRE SIZES | | ENGINE DETAILS | | | | TRANS-MISSION | | REAR AXLE | | | FRONT AXLE | BRAKES | | | | FRAME | |
|-------------|--------------------------|------------|---------|--------------|-----------------|-----------------------------------|--------------|-------------|--------------------------|---------------------------|-----------------------------------|-------------------|----------------|----------------|----------------|---------------------|----------------|---------------|---------------|----------------------------------|----------------------|
| | | Minimum | Maximum | Standard | Authorized Rear | No. of Cylinders, Bore and Stroke | Displacement | Comp. Ratio | Torque lb. ft. | Max. Brake H.P. at R.P.M. | Main Bearings Number and Diameter | Governor Standard | Make and Model | Clear and Type | Drive & Torque | Clear Ratio in High | Make and Model | Location Type | Hand Location | C-A Dimensions (Min. Std. W. B.) | Side Rail Dimensions |
| 1 | Ford Cont'd C-750 C.O.E. | 116 | 156 | 61258.25/20D | 9.00/20 | 8-3 5x3 1/2 | 2797 | 0.244 | 145-3800-5-2 1/2 x 15.0 | Own | Own | 5 Own | HF | H | 7.2 | Own | 041H | 444 | 697 | 66 | 9x3 1/4 |
| 2 | Cab C-800 C.O.E. | 116 | 156 | 65259.00/20D | 10.00/20 | 8-3 5x3 1/2 | 3177 | 0.284 | 155-3900-5-2 1/2 x 15.0 | Own | Own | 5 Own | SF | H | 7.2 | Own | 041H | 485 | 729 | 66 | 9x3 1/4 |
| 3 | P-350 Parcel Divy. | 104 | 122 | 7800 | 7.50/17S | 6-3 5x3 | 2157 | 0.185 | 101-3500-4-2 1/2 x 12.7 | Own | Own | 3 Own | HF | H | 6.8 | Own | 041H | 196 | 302 | 82 | 6-2 1/4 x 19 |
| 4 | w/s P-500 Parcel Divy. | 130 | 140 | 41007.00/18" | 7.50/20 | 6-3 5x3 | 2157 | 0.185 | 101-3500-4-2 1/2 x 12.7 | Own | Own | 3 Own | HF | H | 6.8 | Own | 041H | 323 | 494 | 108 | 8 8x2 8 1/4 |
| 5 | B-500 School Bus | 154 | 154 | 40256.50/20D | 7.50/20 | 8-3 5x3 1/2 | 32157 | 0.185 | 101-3500-4-2 1/2 x 12.7 | Own | Own | 4 Own | HF | H | 6.8 | Own | 041H | 323 | 494 | 128 | 8 8x2 8 1/4 |
| 6 | B-600 School Bus | 184 | 184 | 41106.50/20D | 7.50/20 | 8-3 5x3 1/2 | 32157 | 0.185 | 101-3500-4-2 1/2 x 12.7 | Own | Own | 4 Own | HF | H | 6.8 | Own | 041H | 323 | 494 | 128 | 8 8x2 8 1/4 |
| 7 | B-700 School Bus | 192 | 192 | 47457.50/20D | 8.25/20 | 8-3 5x3 1/2 | 32157 | 0.185 | 101-3500-4-2 1/2 x 12.7 | Own | Own | 4 Own | HF | H | 6.8 | Own | 041H | 366 | 561 | 166 | 8 8x2 8 1/4 |
| 8 | B-800 School Bus | 192 | 192 | 47267.50/20D | 8.25/20 | 8-3 5x3 1/2 | 32157 | 0.185 | 101-3500-4-2 1/2 x 12.7 | Own | Own | 4 Own | HF | H | 6.8 | Own | 041H | 366 | 561 | 166 | 8 8x2 8 1/4 |
| 9 | B-900 School Bus | 233 | 233 | 56907.50/20D | 9.00/20 | 8-3 5x3 1/2 | 32157 | 0.185 | 101-3500-4-2 1/2 x 12.7 | Own | Own | 4 Own | HF | H | 6.8 | Own | 041H | 444 | 697 | 205 | 9x3 1/4 |
| 10 | B-1000 School Bus | 233 | 233 | 61258.25/20D | 9.00/20 | 8-3 5x3 1/2 | 32157 | 0.185 | 101-3500-4-2 1/2 x 12.7 | Own | Own | 4 Own | HF | H | 6.8 | Own | 041H | 444 | 697 | 205 | 9x3 1/4 |
| 11 | Kenworth (D) 521 | 153 | 255 | 125000.10/20 | 11.00/22 | 6-5 1/2 x 6 | 74316 | 0.244 | 145-3800-5-2 1/2 x 15.0 | Own | Own | 5 Own | HF | H | 7.2 | Own | 041H | 722 | 1174 | 67 | 9 1/2 x 3 1/4 |
| 12 | Kenworth (D) 584 | 153 | 255 | 125000.10/20 | 11.00/22 | 6-5 1/2 x 6 | 74316 | 0.244 | 145-3800-5-2 1/2 x 15.0 | Own | Own | 5 Own | HF | H | 7.2 | Own | 041H | 722 | 1174 | 67 | 9 1/2 x 3 1/4 |
| 13 | Kenworth (D) 584 | 153 | 255 | 125000.10/20 | 11.00/22 | 6-5 1/2 x 6 | 74316 | 0.244 | 145-3800-5-2 1/2 x 15.0 | Own | Own | 5 Own | HF | H | 7.2 | Own | 041H | 722 | 1174 | 67 | 9 1/2 x 3 1/4 |
| 14 | Kenworth (D) 584 | 153 | 255 | 125000.10/20 | 11.00/22 | 6-5 1/2 x 6 | 74316 | 0.244 | 145-3800-5-2 1/2 x 15.0 | Own | Own | 5 Own | HF | H | 7.2 | Own | 041H | 722 | 1174 | 67 | 9 1/2 x 3 1/4 |
| 15 | Lincoln A-15 | 120 | 120 | 60007.50/20S | 8.25/20S | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 16 | Lincoln A-25 | 156 | 156 | 62007.50/20S | 8.25/20S | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 17 | Lincoln A-35 | 169 | 169 | 79007.50/20D | 8.25/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 18 | Lincoln A-45 | 205 | 205 | 81007.50/20D | 8.25/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 19 | Mar. Her. DVL-4 | 90 | 118 | 6750 | 7.50/16S | 4-3 1/4 x 4 1/4 | 1346 | 4.105 | 60-4000-3-2 3/4 x 4.8 | Yown | Yown | 3 (Front Drive) | HF | H | 7.10 | Own | 41H | 202 | 327 M2 | 86 1/2 | 10 1/2 x 3 1/4 |
| 20 | Peterbilt (D) 280 | 175 | Opt | 12500.10/20D | 11.00/22 | 6-5 1/2 x 6 | 74316 | 0.244 | 145-3800-5-2 1/2 x 15.0 | Own | Own | 5 Own | HF | H | 7.2 | Own | 041H | 738 | 1052 | 67 1/2 | 10 1/2 x 3 1/4 |
| 21 | Peterbilt (D) 280 | 175 | Opt | 12500.10/20D | 11.00/22 | 6-5 1/2 x 6 | 74316 | 0.244 | 145-3800-5-2 1/2 x 15.0 | Own | Own | 5 Own | HF | H | 7.2 | Own | 041H | 738 | 1052 | 67 1/2 | 10 1/2 x 3 1/4 |
| 22 | Rec. F-14-1 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 23 | Rec. F-14-2 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 24 | Rec. F-14-3 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 25 | Rec. F-14-4 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 26 | Rec. F-14-5 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 27 | Rec. F-14-6 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 28 | Rec. F-14-7 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 29 | Rec. F-14-8 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 30 | Rec. F-14-9 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 31 | Rec. F-14-10 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 32 | Rec. F-14-11 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 33 | Rec. F-14-12 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 34 | Rec. F-14-13 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 35 | Rec. F-14-14 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 36 | Rec. F-14-15 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 37 | Rec. F-14-16 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 38 | Rec. F-14-17 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 39 | Rec. F-14-18 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 40 | Rec. F-14-19 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 41 | Rec. F-14-20 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 42 | Rec. F-14-21 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 43 | Rec. F-14-22 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 44 | Rec. F-14-23 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 45 | Rec. F-14-24 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 46 | Rec. F-14-25 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 47 | Rec. F-14-26 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 48 | Rec. F-14-27 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 49 | Rec. F-14-28 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 50 | Rec. F-14-29 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 51 | Rec. F-14-30 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 52 | Rec. F-14-31 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 53 | Rec. F-14-32 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 x 4 | 2456 | 0.184 | 91-3200-7-2 1/2 x 10 1/2 | YWG79 | YWG79 | 4 Own 601 | N | N | None | None | F30B25H | 308 | 478a | None | None |
| 54 | Rec. F-14-33 | 130 | 172 | 42306.50/20 | 7.50/20 | 6-3 1/2 | | | | | | | | | | | | | | | |

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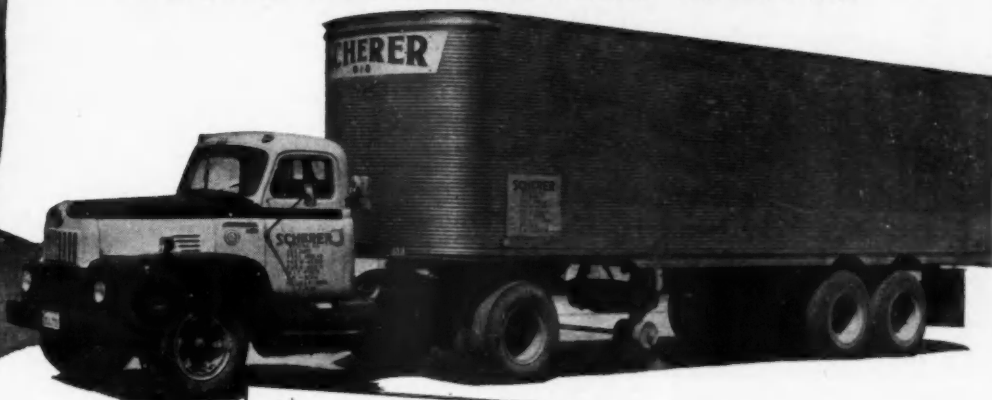
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October 2, 1952

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Quentin Pletsch, our superintendent of Maintenance, reported that he hasn't had a single case of road failure or repair trouble on some units equipped with Wagner Air Brakes that have passed the 100,000 mile mark of profitable hauling.

My reasons for specifying Wagner Air Brakes when ordering new equipment is because our past experience shows that Wagner Air Brakes help us lower maintenance expenditures. Our drivers feel safe because they know they have adequate stopping power at all times.

Sincerely,

Stanley V. Osman

Stanley V. Osman
Purchasing Agent

SVO hk

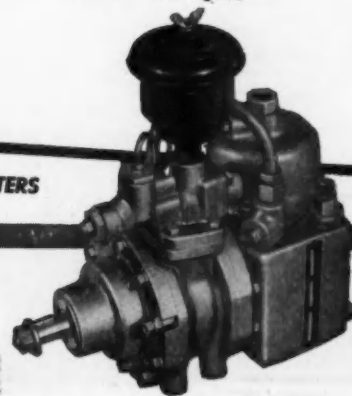


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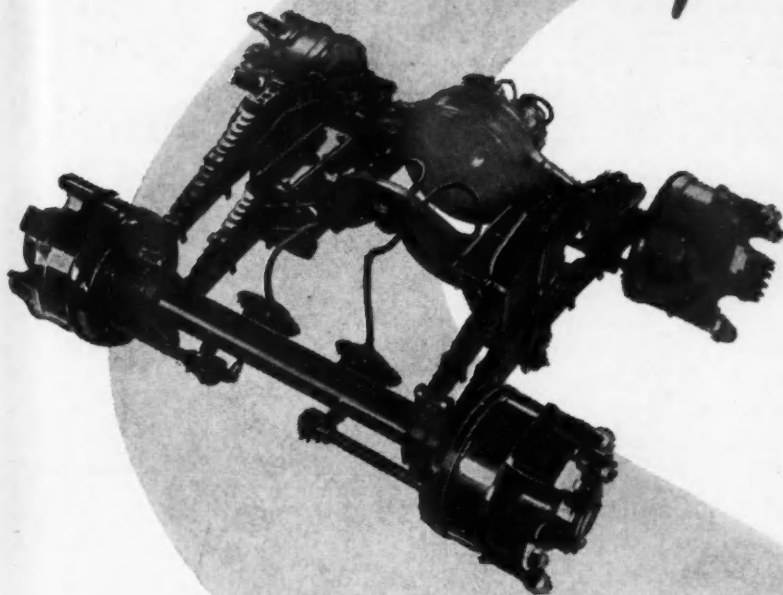
K53-4

(Continued from Page 102)

| Line Number | MAKE AND MODEL | Chassis List Price | WHEEL BASE | | TIRE SIZES | | Gross Vehicle Weight (For Normal Service) | ENGINE DETAILS | | | | TRANSMISSION | | REAR AXLE | | FRONT AXLE | BRAKES | | | | C-A Dimensions (Min. Std. W. B.) | FRAME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|-----------------|--------------------|------------|---------|------------|-------------------|---|-------------------------|---|------------------|--------------|--------------|----------------|-------------------|---------------|------------|-------------------|-------|----------------|----------------|----------------------------------|-------|-------|---------------|----------------|-------------------|----------------|----------|-----------|-------------|-----------|---------------|---------------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | Minimum | Maximum | Standard | Standard and Rear | | Dual rear S-single rear | Maximum Authorized Tire Size (Dues-un-less noted) | No. of Cylinders | Displacement | Comp. Ratio | Torque lb. ft. | Max. Brake R.P.M. | Main Bearings | | Governor Standard | Model | Make and Model | Forward Speeds | | | Model | Gear and Type | Drive & Torque | Clearance in High | Make and Model | Location | Operation | Lining Area | Drum Area | Drum Material | Hand Location | Type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Sterling—Cont'd | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

For Key to References and Abbreviations See Page 97

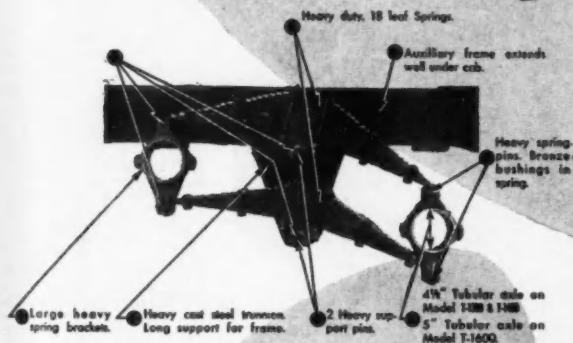
The GRICO Super-flex



The SIMPLICITY OF CONSTRUCTION and the effectiveness of operation make the Super Flex 3rd Axle TOPS in the trucking field from the standpoint of low cost maintenance and efficiency. The GRICO Super-Flex can be transferred easily from one vehicle to another as a truck wears out or becomes obsolete.

Your trucks may be doing a good job now, but watch your profits soar once you have equipped them with Super-Flex 3rd Axles. We say this because we have hundreds of letters from truck and fleet owners telling us that the GRICO Super-Flex has meant better and more economical service through . . . more maneuverability . . . greater fuel savings . . . better weight distribution . . . added payload . . . longer tire wear . . . increased safety . . . and low maintenance.

Your GRICO Super-Flex 3rd Axles are scientifically engineered and ruggedly built to give you long years of economical, trouble-free service. Just check the advantages of the Super-Flex and you'll agree that it's the only trailing axle for your trucks. Look to Grico for the advanced in engineering and feel confident that with the Grico Super-Flex you'll be on the road to higher profits with the finest unit of its kind in the world.



Easily Changed

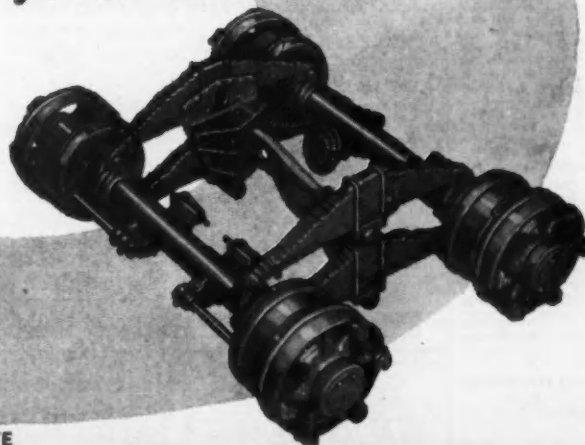
If the nature of your trucking changes, Super-Flex can be transformed into a Grico 2-Axle Drive at a very nominal cost and a minimum of test time.

GRICO Dual Axle UNIT

Convert your present single-axle trailer to a dual-axle job. Haul the maximum payload and cash in on advantages never before obtainable. **LOW MAINTENANCE . . . LIGHT-WEIGHT CONSTRUCTION, YET DURABLE . . . LONGER TIRE WEAR . . . PERFECTLY CONTROLLED BRAKE TORQUE WHICH ELIMINATES CHATTERING.** Yes, truly this Dual-Axle Unit will increase your profits and assure longer, more satisfying service.

Get your Dual-Axle by Grico now. It's easily and quickly done and will permit you to haul the maximum load with long trouble free operation.

FOR ADDITIONAL INFORMATION AND PRICES, WRITE



GRICO TWO AXLE DRIVE COMPANY

19810 W. EIGHT MILE ROAD
DETROIT 19, MICHIGAN

Continued from Page 104)

| Line Number | MAKE AND MODEL | Chassis List Price | | WHEEL-BASE | TIRE SIZES | | Chassis Weight (See definition) | Standard Rear and Front | Maximum Authorized Tire Size (Dual not-) | ENGINE DETAILS | | | | TRANSMISSION | | REAR AXLE | | | FRONT AXLE | BRAKES | | SERVICE | | C-A Dimensions (Min. Std. W. B.) | Type | | | | | | | | | |
|-------------|----------------|--------------------|---------|------------|----------------------|---------------|---------------------------------|-------------------------|--|----------------|------------------|--------------|-------------|----------------|---------------------------|----------------------------|-------------------|----------------|------------|----------------|----------------|----------------|----------------|----------------------------------|--------|-------------|---------------|----------------|----------|------|----------------|-----------|------|------|
| | | Minimum | Maximum | | Gross Vehicle Weight | D-single rear | | | | S-double rear | No. of Cylinders | Displacement | Comp. Ratio | Torque lb. ft. | Max. Brake H.P. at R.P.M. | Main Bearings and Diameter | Governor Standard | Make and Model | | Forward Speeds | Make and Model | Clear and Type | Drive & Torque | | | Clear Ratio | Range in High | Make and Model | Location | Type | Make and Model | Operation | Drum | Drum |
| 1 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 2 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 3 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 4 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 5 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 6 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 7 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 8 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 9 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 10 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 11 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 12 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 13 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 14 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 15 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 16 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 17 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 18 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 19 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 20 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 21 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 22 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 23 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 24 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 25 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 26 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
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| 28 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 29 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 30 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 31 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 32 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 33 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 34 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 35 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 36 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 37 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
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| 39 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 40 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 41 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
| 42 | Marmion-Herr | 110 | 110 | 5300 | 365/50/16S | 365/50/16 | 3650 | 50/16 | 50/16 | 8-3 | 133 | 236 | 9.08 | 104 | 100-3500 | 2 | 54 | 6 | 4 Ford | Hy | Hy | H | ** | 4-27 | 4 Ford | FH | FH | 178 | 290 | X | 40 | 50 | 13 | C |
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Leading operators today specify rigs equipped with Hendrickson Tandem Units.

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THE BALL AND SOCKET JOINTS provide flexibility and prevent distortion.

THE TORQUE ROD reduces the tendency of the axles to turn due to starting and stopping inertia.

First specify TANDEMS... then specify HENDRICKSON TANDEM!



HENDRICKSON MOTOR TRUCK COMPANY

8001 West 47th Street • Lyons (Chicago Suburb) Illinois

(Continued from Page 103)

| Line Number | MAKE AND MODEL | Chassis List Price | WHEEL-BASE | | Chassis Weight (See definition) | TIRE SIZES | | ENGINE DETAILS | | | | | | | | TRANSMISSION | | REAR AXLE | | | FRONT AXLE | BRAKES | | | | | FRAME | | | | |
|----------------------------------|----------------|--------------------|------------------|------------------|---------------------------------|---|-------------------------|--|----------------|----------------------------------|--------------|-------------|----------------|---------------------------|--------------------------------------|-------------------|----------------|----------------|----------------|---------------|------------|----------------|------------|---------------|----------------|----------|-------|-----------|--------|-----------|---------------|
| | | | Minimum Standard | Maximum Standard | | Gross Vehicle Weight for Normal Service | Standard Front and Rear | Maximum Authorized Tire Size (Ducks uns- less noted) | Make and Model | No. of Cylinders Bore and Stroke | Displacement | Comp. Ratio | Torque lb. ft. | Max. Brake H.P. at R.P.M. | Number and Diameter of Main Bearings | Governor Standard | Make and Model | Forward Speeds | Make and Model | Gear and Type | | Drive & Torque | Gear Ratio | Range in High | Make and Model | SERVICE | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | Location | | Operation | Lining | Drum Area | Drum Material |
| C-A Dimensions (Min. Std. W. B.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Side Rail Dimensions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|------------------|----|-----|-----|-------|------|----------|------------|-----------|--|-----------------|-------|------|----------|-------------|--|--------|----------|---------|----|---|----|-------|-------|----------|------|--------|-----|----|----------------|---|
| 1 | Trucktail-Conf'd | | 160 | 229 | 28000 | 7800 | 7.50/20 | 9.00/20 | Chev. | | 6-3 1/2 x 3 1/2 | 235.7 | 1200 | 108-3600 | 4 St. Chev. | | 15 1/2 | 12 Chev. | | HF | R | ** | -6.17 | Chev. | C61HV | 607 | 930 Co | TLX | 83 | 9 1/2 x 3 1/2 | C |
| 2 | (C) C5403 | 4R | 126 | 204 | 30000 | 7650 | 7.50/20 | 9.00/20-10 | Chev. | | 6-3 1/2 x 3 1/2 | 235.6 | 1193 | 103-3600 | 4 St. Chev. | | 15 1/2 | 12 Chev. | | HF | R | ** | -6.17 | Chev. | C61HV | 607 | 930 Co | TLX | 83 | 9 1/2 x 3 1/2 | C |
| 3 | Ward La Fr. DRT | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con T6427 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 4 | (D) D371 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 5 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 6 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 7 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 8 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 9 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 10 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 11 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 12 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 13 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 14 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 15 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 16 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 17 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 18 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 19 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 20 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 21 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 22 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 23 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 24 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 25 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 26 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 27 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 28 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 29 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 30 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 31 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 32 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 33 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 34 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 35 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 36 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 37 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 38 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 39 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 40 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 41 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 42 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 43 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 44 | (D) D51 | | 180 | 220 | 39500 | | 10.00/20 | 11.00/20 | Con R6572 | | 6-4 1/2 x 3 1/2 | 427 | 340 | 152-2600 | | | 15 1/2 | 15 T | SD3010P | EF | L | ** | -5.27 | Tim | 3501 TFW | T41A | | | | 10 1/2 x 1 1/2 | 4 |
| 45 | (D) D51 | | 180 | 220 | 39500 | | | | | | | | | | | | | | | | | | | | | | | | | | |

For Key to References and Abbreviations See Page 97

[illegible]

Sun Glasses Promote Both Driver Comfort and Safety

ALL drivers should be encouraged to wear sun glasses during the summer. Studies recently conducted at Temple University show that the effects of over-exposure to bright sunlight last longer than most people real-

ize and are definitely a handicap to safe driving.

For drivers who operate only during daylight hours, some protection from the sun's effect on their eyes is desirable for their own comfort and safety.



use only
**FACTORY NEW
GENUINE
BENDIX DRIVES
and
PARTS!**

It's easy to build a reputation for quality if you use only genuine parts in your repair work. For example, when you service Bendix* Drives be sure to use only *factory new* Bendix Drives and Parts. This means your customers will get the same dependable performance that is built into every original Bendix Drive—performance proven by over 85,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor.

*REG. U.S. PAT. OFF.



Bendix Drive

ECLIPSE MACHINE DIVISION of
ELMIRA, NEW YORK

Export Sales: Bendix International Division, 72 Fifth Ave., New York 11, New York



By Dr. W. Schweisheimer

Drivers who operate without this protection for several hours of bright daylight driving and continue on their routes into the evening hours are asking for trouble, the studies show.

Individuals vary widely in their sensitivity and reaction to over-exposure to bright sunlight while driving, it was found, but on the average sensitivity to light at night was reduced by one-third or more after a day of driving without protective glasses. In some cases sensitivity to light at night was reduced by as much as 90 per cent. These effects are commonly known as night blindness. Obviously, such loss of vision is a handicap to safe driving.

The major effect of exposure to bright rays of the sun is that the visual purple, a pigment in the retina of the eye, is bleached. The eye's ability to adjust from bright to dim light depends on the presence of this pigment in the retina. Thus the bleaching effect of the sun's rays must be overcome before sufficient visual purple is supplied and the time needed for the eye to adjust to the dimmer light is increased. During this time the seeing ability of the person is impaired.

The studies established that much of the after effect of glare wears off overnight. But in most people some effect persists for two or three days and in some cases it will continue for more than a week.

The glasses used need not be expensive. An expert of the *Journal of the American Medical Association* recently stated that the average sun glasses obtainable in drug stores throughout the country, if sufficiently dark are as a rule comfortable to the eyes of the average wearer on the average bright day.

General aim of protective glasses is to reduce the total amount of light entering the eyes. The idea that certain makes of glass do not transmit the "harmful" ultraviolet light is mostly sales talk, the expert says, as ordinary crystal glass allows but little ultraviolet light to pass through.

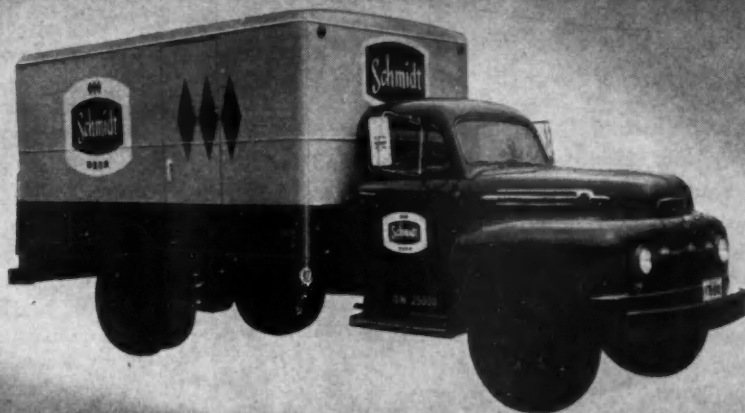
For eye comfort and safety this summer, therefore, encourage your drivers to wear dark glasses, and the darker the glass the more protection it will give.

Polly Pipp: "You say that the Sparkplug salesman you've been dating just won \$100,000 on the sweepstakes? Are you sure you've got the right dope?"

Lovin' Lovin' Lula: "Ya mighty right, gal. Leastwise he'll do until a bigger dope comes along."

COMMERCIAL CAR JOURNAL, August, 1953

"Dulux" on Schmidt Brewery Trucks



"sparkles" year-round in Minnesota



With completely new packaging in 1953, the Jacob Schmidt Brewing Co. of St. Paul, Minnesota, decided to give their fleet of 300 distributor and brewery trucks a new look that would both reflect the quality of the product and have quick recognition value. For this important job, the company again chose durable Du Pont DULUX Enamel on the strength of its reputation for *staying* sparkling fresh in any kind of weather . . . for *staying* bright to catch the public eye.

Mr. Jim Keeler, Advertising Manager of the Jacob Schmidt Brewing Co., has this to say about their four years' experience with DULUX:

"... the paint has held up remarkably well and preserved the luster of the original colors. I am happy to say that the recognition value and general acceptance have been excellent."

So take a tip from Schmidt Brewery. Keep your fleet looking its best always and all ways with DULUX Enamel.

E. I. du Pont de Nemours & Co. (Inc.),
Refinish Sales, Wilmington, Delaware



RAY PATOILE, Transportation Superintendent, knows DULUX flows out smooth and easy in the paint shop ...dries to a tough, durable coat that sparkles without rubbing. He keeps the fleet smart-looking in DULUX Charlotte Ivory and DULUX Brown.



JIM KEELER, Advertising Manager, Jacob Schmidt Brewing Co., has seen DULUX take the stress and strain of many miles over the years without cracking or chipping, and keep its initial high gloss through all kinds of weather month after month.

DU PONT

DULUX enamel

BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY

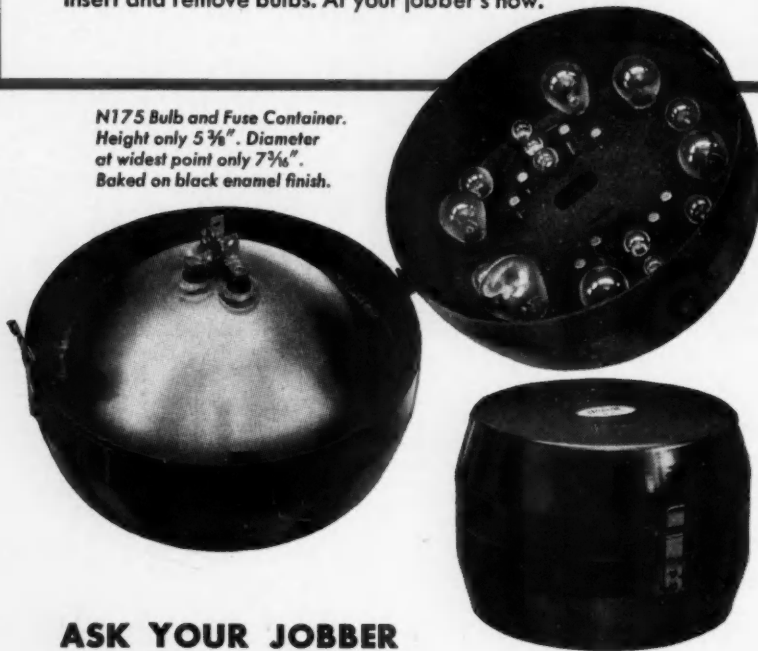


Arrow BULB and FUSE CONTAINER

Specifically designed to help you comply with ICC Regulation 193.95 (b) and (c)

Holds 8 fuses, 16 spare bulbs and 1 sealed beam unit in a foam rubber mounting that insulates against shock and vibration. Unique tapered shape makes container easy to handle, wedges sealed-beam unit tight, makes it easier to insert and remove bulbs. At your jobber's now.

N175 Bulb and Fuse Container. Height only 5 3/4". Diameter at widest point only 7 3/4". Baked on black enamel finish.



ASK YOUR JOBBER FOR ARROW PRODUCTS... THEY'RE THE BEST



See the complete line of Arrow Safety After Dark Equipment. Get a free Arrow catalog from your jobber today.



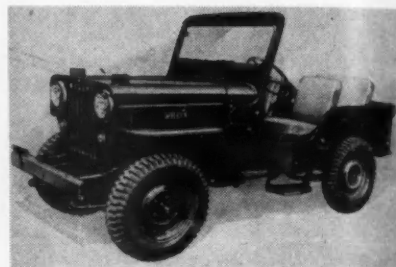
Arrow Safety Device Company
Mt. Holly, New Jersey



Civilian Jeep Uses New Engine

USING a new four-cylinder "Hurricane" F-head engine, a new civilian model of the Willys Universal Jeep is now available.

The new 134.2 cu in. engine has a maximum brake horsepower of 72 at 4000 rpm, an increase of 20 per cent over the rating of previous models. Maximum torque has been increased from 105 to 112 lb ft at 2000 rpm and



compression ratio has been upped from 6.5 to 6.9-1. The increases in power and torque result from the use of the F-head design which permits an increase in the intake valve diameter from 1 15/32 in. to 2 in. This is said to increase the efficiency of the combustion chamber and to give added fuel economy. The company also stresses that the torque is increased materially at low engine speeds where high torque is especially desirable.

Designated as Model CJ-3B, the new Jeep has a higher hood profile and revised cowl and windshield lines. The cowl is 4 3/4 in. higher than on previous models. Other changes include a new transfer case which gives quieter operation and longer life. Provisions for turn signals have also been made on the new model.



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| Cost per Mile |
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| Under 4 cents |
| 4.0 to 4.4 |
| 4.5 to 4.9 |
| 5.0 to 5.4 |
| 5.5 to 5.9 |
| 6.0 to 6.4 |
| 6.5 to 6.9 |
| 7.0 to 7.4 |

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How Much Is That Salesman's Mile Worth?

Continued from Page 73

and the mileage operated per month as the basis for establishing a daily allowance. In addition to the daily allowance, the company pays for public liability and property damage insurance, license fees (including driver's license and registration) actual parking fees, bridge and ferry tolls and garage expenses, not to exceed \$1.00 per night when on overnight trips.

Company-Owned Fleets

MOST cars covered by the current survey were company-owned, although there were a greater number of companies using salesman-owned cars. It appears that the larger fleets are more economical when company-owned and under the direction of a competent fleet manager.

It is true, though, that there are many exceptions. Many companies prefer the minimum amount of bookkeeping, the minimum griping from salesmen and the minimum need for capital investment made possible by a salesman-owned operation.

An average figure for a company-owned car's cost per mile cannot be established due to the great variety of methods used by the companies to arrive at this figure. The general range, however, may be determined from the following grouping of data supplied by the fleets:

| Cost per Mile | Number of Companies | Number of Cars |
|---------------|---------------------|----------------|
| Under 4 cents | 3 | 644 |
| 4.0 to 4.4 | 2 | 4375 |
| 4.5 to 4.9 | 11 | 2412 |
| 5.0 to 5.4 | 7 | 744 |
| 5.5 to 5.9 | 12 | 9320 |
| 6.0 to 6.4 | 3 | 193 |
| 6.5 to 6.9 | 2 | 154 |
| 7.0 to 7.4 | 2 | 20 |

It can be seen that approximately 75 per cent of the companies and the number of cars have a cost per mile ranging between 4.5 and 5.9 cents.

It is apparent that companies which own their own cars are far more cost conscious than are firms using salesman-owned vehicles. Cost statistics of company-owned cars are generally expressed to several decimal points, while in the case of allowances granted to salesmen, the usual adjustment is a full cent per mile.

Varying Practices

AS MIGHT be expected, most companies have their own particular policy with regard to such things as depreciation, purchase of supplies and equipment, sale of used cars to em-

ployees, etc., based on their own experience.

Most common depreciation practice, and one which is most acceptable to the Treasury Department, is that of depreciating cars on the basis of 25 per cent per year. Of 40 companies checked in the survey, 19 used this system, 9 used a 20 per cent figure while 6 de-

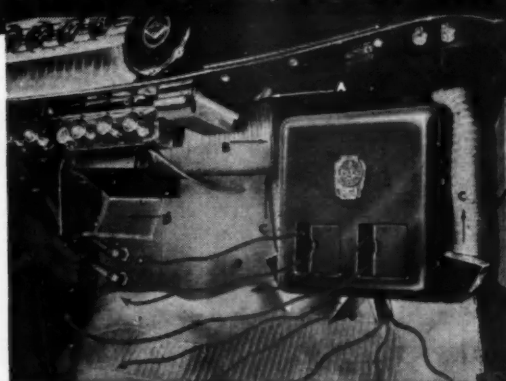
preciated on the basis of one-third per year.

A number of companies have found it satisfactory to base their depreciation policy on mileage, ranging from 40,000 to 75,000 miles, rather than on a time basis. This has an advantage of permitting the company to more rapidly depreciate cars which have a high annual mileage.

A similar situation exists with regard to trade-in policies, with some companies setting a time-life for their units, others trading them off after a fixed

(TURN TO PAGE 118, PLEASE)

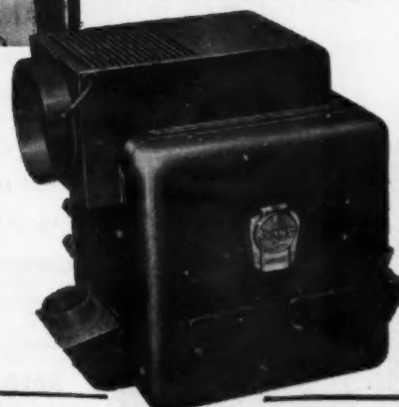
NEED MORE THAN JUST A HEATER?



- A—Damper recirculation control
- B—Fresh outside air from cowl ventilator
- C—To defrosters
- D—Door opens for fresh outside air from cowl ventilator in summer

EVANS FEATURES PROVIDE HEAVY DUTY DEPENDABILITY WITH SERVICE-FREE PERFORMANCE

1. Heavy duty bus type low drain motor
2. Heavy duty large capacity core
3. Complete accessibility for inspection or servicing
4. Controls provide accurate selection of warmed air, temperature and flow
5. Fresh or recirculated air, warm or cool, in any combination
6. Large defroster outlets may be located to suit cab requirements



POWERFUL EVANAIR FAN CHANGES CAB AIR 3 TO 4 TIMES PER MINUTE

Precision die-molded in one piece of lightweight strong metal. Will not chip, crack or bend. Not affected by temperature. Aerodynamic design, circulates more air with less noise, less current draw. Lighter weight results in less load on motor bearings, insuring longer life.

EVANS CUSTOM ENGINEERING PAYS OFF IN SERVICE

Because Evans heating and ventilating equipment is custom engineered for each installation, you get highest performance and longest service life. You get balanced design that takes advantage of every B.T.U. of heat, every inch of space, every amp of current. And you get the inde-

structible Evanair fan that will not get out of shape or balance.

For true operating economy, look for the Evans trade-mark on your vehicle's heating system. Evans Products Company, Heating & Ventilating Division, Dept. Q-8, Plymouth, Michigan.

EVANS BALANCED HEATING & VENTILATING **CUSTOM HEATERS** FOR EVERY TRUCK AND BUS



“*The Lug*”

makes the difference...

CAMPBELL *Lug-Reinforced* **TIRE CHAINS**

Lug-Reinforced Construction, a patented feature which only CAMPBELL offers you, makes a **big difference** in your operating costs per mile.

Extra metal in Campbell Lugs means extra mileage, cuts link breakage to a minimum. The lugs dig in for greater traction on ice and snow . . . greater protection against dangerous skids and side slips. You get going, keep going and stop safely.

Be sure each unit in your fleet has Campbell *Lug-Reinforced* Tire Chains —before the snow flies. Call your jobber or write direct.

Campbell Truck and Bus chains, for every size and every type of service, are packed in durable color-coded bags for easy storage and quick identification.



CAMPBELL CHAIN *Company*

MAIN OFFICE: YORK, PA.

West Burlington, Iowa; Portland, Oregon; Sacramento, Calif.

Chain for every need...*industrial...farm...marine...automotive*



... Salesman's Mile

Continued from Page 117

mileage. Companies using time as the basis usually trade their vehicles after two or three years, with almost equal preference for either interval. Fleets using mileage as the basis of their trade-in policy usually fix approximately 40,000 miles as the limit. Several companies have set up a maximum time life and mileage life for their vehicles, so that whichever limit comes first determines the trade-in point.

Parts and accessories for sales cars are generally not purchased in fleet quantities. Most large fleets are so scattered that central purchase of parts and accessories is uneconomical, while small operators find that the savings possible with mass orders are not great enough to offset the nuisance of handling them.

Of the companies reporting, 60 out of 100 do not permit salesmen to purchase used company cars. In companies which do follow the practice of selling cars to their employees, there is seldom any preference given to the employee. Market value, trade-in value, competitive bids are the most common methods of pricing.

Approximately two out of three of the companies reporting said that they permitted employees to use company cars for personal driving, while three

(TURN TO PAGE 120, PLEASE)

Tubeless Tire Wheel



Shown above is a specially designed truck wheel which The Budd Co., Philadelphia, largest manufacturer of heavy-duty wheels in the country, is testing in an effort to bring the advantages of tubeless tires to truck operators. The new wheel is undergoing extensive tests with the tubeless truck tire which one of the major tire companies announced recently.

COMMERCIAL CAR JOURNAL, August, 1953

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Unique production processes build Extra quality into

Eaton Valve Seat Inserts



Years of production experience and close engineering cooperation with leading engine manufacturers, combined with modern high-volume facilities, enable Eaton to furnish high-quality valve seat inserts to meet the specific requirements of the automobile, truck, and tractor industries. The range covers all types of inserts from low-priced, volume production passenger car inserts up to large-size, puddled-face inserts of suitable materials for large heavy-duty installations. A unique method of puddling special facing materials on insert seats enables Eaton to furnish inserts with superior corrosion and wear-resistant qualities at minimum cost.



EATON MANUFACTURING COMPANY

General Offices: CLEVELAND, OHIO

SAGINAW DIVISION: 9771 FRENCH ROAD • DETROIT 13, MICHIGAN



PRODUCTS: Sodium Cooled, Poppet, and Free Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Rotor Pumps • Motor Truck Axles • Permanent Mold Gray Iron Castings • Heater-Defroster Units • Snap Rings • Springtites • Spring Washers • Cold Drawn Steel • Stampings • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers

COMMERCIAL CAR JOURNAL, August, 1953

... Salesman's Mile

Continued from Page 118

out of five permitted employees to use company cars on their vacations. Methods of charging the employees for this use vary.

Fleet Leasing

THE majority of companies which now lease their car fleets are quite happy with the arrangement. They

analyze their selling situation carefully and work out with the leasing organization the best plan for their specific operation.

Most leasing arrangements provide for a fixed monthly payment per car which runs from \$72.50 up. In return for this the leasing organization manages the fleet and takes care of everything except the gasoline. It is this feature of taking care of all of the fleet's clerical detail that proves the most appealing to many companies.

With one or two exceptions, companies using leased fleets permit their

salesmen personal use of the cars provided they pay for their own gasoline. Because the company pays a fixed monthly leasing charge, the additional mileage is of little additional cost.

From the cost standpoint, leasing runs somewhat higher than salesman-owned cars, although an exact figure is difficult to arrive at.

An effort was made to determine at what point it is more economical to have leased fleets or company-owned cars. Reports from companies answering this question ranged from 15,000 to 30,000 miles, indicating that there are factors other than economy and mileage entering into the decision.

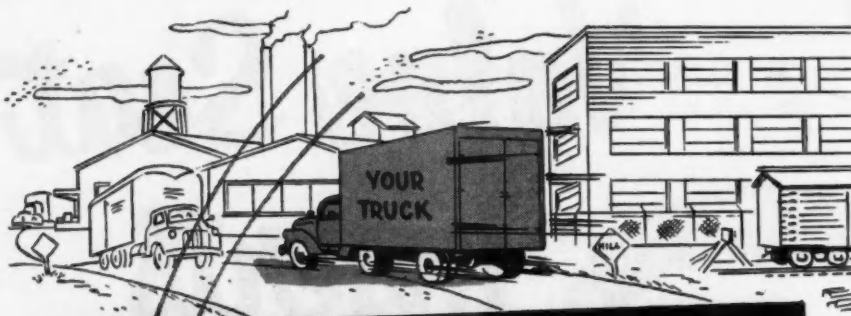
The number of cars operated by the fleet seems to have a significant bearing on this decision. Reports show that, where there are relatively few cars in the fleet, leasing sometimes proves to be beneficial.

One striking point noted in the studies of salesman-owned, company-owned and leased fleets was that net costs have not increased in buying automobile transportation for salesmen as much as the conversation of company officials would indicate. Some place within the accounting procedure, the increased price of automobiles is dissipated without undue influence on cost per mile reports. Unquestionably, much of this favorable picture is due to the high trade-in values which have prevailed during the postwar years.

A factor many fleet executives are watching with interest is the break in used car prices which has been taking place in the last few months. There is considerable opinion that fleet leasing may suffer rate adjustments if trade-in prices fall as drastically as some foresee. The pressure of new car production, others anticipate, may tend to hold used car prices up with the dealer taking the loss, thus following the pre-war pattern.

END

Please Resume Reading Page 74



"MY TRUCKS SEEM TO BE BUSY"...

**said the boss... then he added
"Wonder if they're as busy as they look!"**

If he installed **SERVIS RECORDERS** on them, he might be astonished to find out that often their *standing time* added up to more than their *running time*. Now this idle time is something you often can't see; but the little Servis Recorder tells you about it every day.

For instance, take one of your own trucks—that one on your West Side route. The truck looks busy. It seems to be working all the time. It starts the day right—leaves the garage on time—gets its morning load promptly. The driver seems to be a faithful and conscientious worker. Apparently the truck puts in a full day's work. And yet—

If a **SERVIS RECORDER** is installed on that truck, and you look at its chart the next morning, you find out plenty—

The
Chart
that
Tells
the
Story

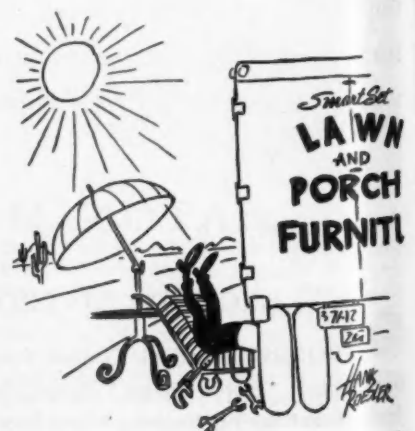


- there were two long stops during the morning that the route didn't justify.
- moreover, the truck actually stood idle from 2 to 4 o'clock for some mysterious reason!
- as a consequence, it didn't check in for the day until nearly 7 o'clock—thus expensive **OVERTIME**.

Write for our helpful booklet—"Ten Ways of Getting More Work Out of Motor Trucks". It's free.

THE SERVICE RECORDER COMPANY
1375 Euclid Avenue • Cleveland 15, Ohio

The Servis Recorder
Tells Every Move Your Truck Makes



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Page 74

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August, 1953



Quick Installations

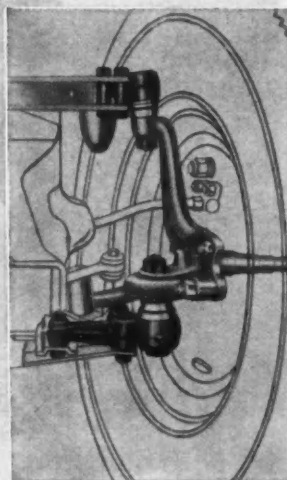
with Thompson center bearing hangers
for ALL trucks

The Thompson-engineered flexibility in the new center bearing hanger assembly eliminates the need for precise positioning by shims and does away with adjustments with the two simple snap rings which retain the bearing. These developments mean greater ease of installation and service. Complete assembly is available to manufacturers of all trucks . . . light, medium and heavy duty.

In addition, the Thompson assembly permits, for the first time in truck-building history, standardization of propeller shaft inventories. Fewer lengths can now be stocked and used, again making assembly and service easier . . . drive more direct.

Thompson has engineered ideal bearing operation into this new assembly with a combination of shaft seals and slingers. Free-swinging arms and rubber bushings eliminate cramping of the bearing due to frame twist and drive-line movement. And high frequency vibration is reduced through the use of four, widely-spread rubber bushings which act in tandem . . . helping insulate the cab from drive line and frame noise.

Investigate this Thompson truck development. Let us show you how it will cut production and distribution costs, improve "in service" operation. Write to Thompson Products, Inc., 7881 Conant Avenue, Detroit, Michigan, or telephone WA 1-5010.



BALL JOINT SUSPENSION—
another Thompson Development
for automotive improvement.

You can count on
**Thompson
Products**

MICHIGAN PLANT
DETROIT • FRUITPORT • PORTLAND

Radio Weather Roundup...

Continued from Page 78

cause, could be reported to the individual company headquarters at minimum expense. This report in turn could be immediately relayed to a local radio station which had previously agreed to broadcast the service.

For example, such a message could read as follows: "QH50WUS1 SBGW

US15." This signal transmitted over the system decoded would mean:

- Q—The identifier.
- H—For highway.
- 50—State Route 50.
- W—West of.
- US1—U.S. Route 1.
- S—Slowed with short delays.

B—Bypasses provided for all traffic.
G—Grading being done.
W—Widening being done.
US15—As far as U.S. Route 15.

This is a simple and more or less routine message that might be noted only in passing for most operators but would be a very important for an operator running a very tight schedule. A message, however, that showed that a flash flood had washed out an important bridge or that a sudden mountain snowstorm had tied up traffic would immediately affect all traffic dispatching over the route. The sooner these messages reached the dispatchers the quicker traffic could be re-routed and time, equipment and much operating expense could be saved.

Detail Involved

THE proposed program is geared to complete cooperation between all of the carriers including bus operators, truck fleets and individual truckers. There must be a free and universally accepted responsibility for reporting and relaying the information. Once it is agreed that the vehicle encountering the hazard first can be depended upon to report it, then the organization, especially the channels of communications, can be worked out.

True, the average trucker does not, as yet, have two-way radio communications. But many of the inter-city buses do and most police have elaborate systems. In addition many members of individual and cooperative highway patrols (see COMMERCIAL CAR JOURNAL, June, 1953, page 64) are radio equipped.

They could supplement word of mouth reports (debriefing as we called it in the Air Force) from drivers arriving at terminals or check points, and by individual reports from drivers through public telephone facilities. In times of real emergency, the amateur radio networks could be depended upon for valuable assistance. Once the information is relayed and reaches normal news channels dissemination by broadcast will be rapid. Once the on-the-spot information is relayed to whatever check points may be established, it becomes a matter of coordinating the data and disseminating it by the fastest and widest possible means. It is conceivable that the dispatchers at the terminals of the larger carriers, along with police radio headquarters could receive the data, and pass it along to a central clearing house or directly to radio and television stations in the areas concerned, or over much greater areas in an emergency, by radio and teletypewriters.

(TURN TO PAGE 124, PLEASE)

BON-E-CON TOOLS

TOOLS
any mechanic
would value
...at prices
anyone can
afford!

- Gas station attendants
- Apprentice mechanics
- Car owners
- Weekend mechanics

Look for this BON-E-CON Display
wherever fine tools are sold.

BONNEY FORGE & TOOL WORKS • ALLENTOWN • PENNSYLVANIA

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Pre-mixing Du Pont "ZERONE" or "ZEREX" Has Saved Us Time And Money

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

"We have used Du Pont anti-freezes for 15 years with complete satisfaction,"

*says Walter Monahan, maintenance manager,
New York-New Brunswick Auto Express Co.*

Both "Zerone" and "Zerex" mix completely with water in all proportions. Their special Du Pont chemical rust inhibitors will not separate from solution while standing. That means you can make up a pre-mix of properly proportioned solution and have it constantly on hand for replacing cooling system losses. With a pre-mixed solution of Du Pont anti-freeze you avoid wasting your money by pouring into your radiators more anti-freeze than you need.



REG. U.S. PAT. OFF.

**BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY**

**HERE'S WHY OTHER FLEET MEN DEPEND ON DU PONT ANTI-FREEZES
TO CUT COSTS, SAVE VALUABLE TIME**



"For Economy and Convenience"
"You can depend on Du Pont products. I'm sold on 'Zerex'—it stays pre-mixed."
L. K. Brown
Hertz Drive-ur-Self,
Denver, Colorado



"Saves 1/3 on Volume"
"Another advantage of pre-mixed solution is that the mechanic has a standard mix. Eliminates hydrometer checking."
Alvis Dennison
Alvis Dennison
Construction Co.
Albuquerque, N. M.



"Pre-mixed 'Zerone' is an economy—saves time, too."
"Zerone is odorless, doesn't boil away, doesn't cause rust."
Tex Kriewald
Kelly Coal Company
Detroit, Michigan

Radio Weather Roundup

Continued from Page 122

An Early Trial Plan Successful

THE writer has had the experience of trying the coordination of highway information by debriefing truck and bus operators and found that the information so gathered can be most reliable. In fact, at the time we tried, the system was far more efficient, more detailed and localized, than could be

obtained from any other source. The reason for the test was in connection with a weather broadcast on a small radio station in the midwest (WLBC, Muncie, Ind.) and before World War II. At this time we were able through radio contacts and the usual news channels to get sufficient weather data and forecasts for a fairly adequate coverage of the weather story in detail.

We found at first, though, that we were in sad shape when it came to telling folks whether driving conditions on a particular route were safe or even passable. In canvassing the possibilities,

we reached several of the major truck fleet and bus operators in and through the area. We not only received complete cooperation but the information proved quite accurate and most practicable.

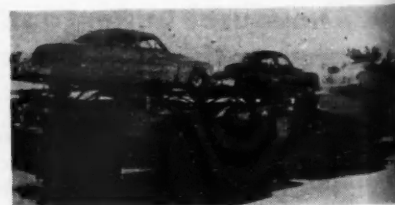
One of the major difficulties at the time was the necessity of rather lengthy telephone conversations and the dependence upon a rather hit and miss system of debriefing at the depot, thus requiring cross checking and duplication. These things we think can be overcome by a system of "Q" signals that can be prepared on a simple standard form to be checked at the point of origination of the reports.

Such reports when used in conjunction with the general aviation weather observations and forecasts of the U. S. Weather Bureau (much of which may be available on local teletypewriter circuits and the news wire services) will complete the weather picture for the commercial highway operator. Details of highway conditions are of necessity not available as a part of the regular weather reporting system because of their bulk. Valuable information to complete the picture is compiled during the winter months in the form of snow depths reports tabulated every six hours with special reports hourly and national summaries daily. Hourly reports of existing weather are collected from some mountain stations but few mountain slopes have observers located advantageously to report highway conditions. This then leaves wide gaps that can be filled in by reports from the nation's commercial vehicle operators through the operation of a plan such as outlined here.

END

Please Resume Reading Page 80

Six Car Transporter



Acme Trailer Mfg. Co., Fresno, Cal., has designed a new automobile transport capable of hauling six passenger cars or five pickup trucks and one car. An important feature of the new design is that the trucker is enabled to haul return freight, such as lumber or packaged goods. The unit is so designed that cars to be carried on the truck can be run up a continuous ramp without unhitching the trailer. Runways are installed above and below on the truck, each long enough to accommodate a car and both at the same levels as corresponding runways on the trailer.

OUT OUR WAY



Sales leader—because it's value leader!

SOL-SPEEDI-DRI

You buy an oil and grease absorbent because you don't want to take chances. So don't take chances with the absorbent you buy! Use Sol-Speedi-Dri to keep your floors clean and slip-proof. It leads the field because pound for pound, dollar for dollar, it gives you more for your money, all factors considered. Laboratory control keeps quality always uniform. Send coupon today for free sample!

Warehouse stocks maintained in principal cities of the United States and Canada.

Inquirers in New York, New England, and New Jersey should write to Speedi-Dri Corp. Elsewhere in U.S. to Waverly Petroleum Products Co., 1724 Chestnut St., Phila. 3, Pa. In Canada, G. H. Wood & Company, Limited, Toronto. Branches throughout Canada.

SPEEDI-DRI CORP.
210 W. Washington Sq., Phila. 5, Pa.



FREE SAMPLE:

Fill out the coupon and mail today for free sample and literature.



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A.P.C.
VALVES

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BRAKE LINES - CLUTCH FACINGS

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GEARS - BALLS - SHAFTS

Modac
FAN BELTS AND
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Monmouth
TIGER GRAPING
CLUTCH PLATES & PARTS
CHARTER PARTS

New Britain
HARD TOOLS

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TRANSMISSION GEARS
CLUTCH PLATES & PARTS
TIGER GRAPING

RARITAN
ROCKER BEARINGS

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RAYMOND
PUMP SPRINGS

Soundmaster
MUFFLERS

STANDARD
GASKET RETAINERS

Spicer
TENSION JOINTS

Thomson
THERMOSTATS

TRICO
HORN AND BELL
SAFETY PRODUCTS

UNITED
PUMP
HYDRAULIC BRAKE
MASTER CYLINDER AND
SLAVE CABLES

VTSALL
SAFETY LIGHTS & SIGNALS

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WISCONSIN
PORTS - SLEEVES

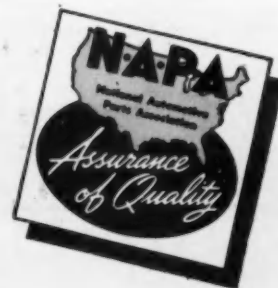
ZOLLNER
PUMP EQUIPMENT



It's elementary! Once he knows your fleet, your NAPA Jobber is prepared to give you a supply service unsurpassed anywhere. Normal requirements of parts and supplies he can deliver from stock. Emergency orders he can get for you in record time from nearby NAPA Warehouse master stocks. And on the lines he handles, the NAPA Seal is double assurance of genuine quality—for cars, trucks and buses of all makes. Why shop around? Call in your NAPA Jobber . . . call on him often!

NATIONAL AUTOMOTIVE PARTS ASSOCIATION • DETROIT 1, MICHIGAN

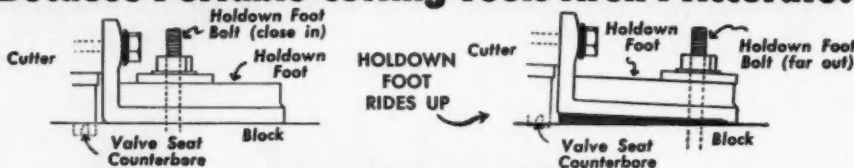
N.A.P.A.
*is the largest Independent Parts
Organization in the Industry!*



Why Are Replacement Valve Seats .008 or .010 Oversize?

(WHEN FACTORY REQUIREMENTS ARE ONLY .004)

Because Portable Cutting Tools Aren't Accurate!



When the cutter is fed down, the foot will lift slightly even on the best equipment. If the bolt through the Holddown Foot is close to the fulcrum, a fairly accurate hole is made. The hole becomes larger and tapered when the bolt is moved farther from the fulcrum.

In use, the bolt position may change two or three times on the same cylinder head or block, and holes may vary from .001 to .006. This means that press fit interference varies from .002 to .010. The result is excessive press fit, which causes valve port cracks and distorted, cocked seats, which causes valve burning and breakage.

PETERSON'S



SELF-LOCKING SCREW-IN VALVE SEAT WITH EXPANSION CLEARANCE

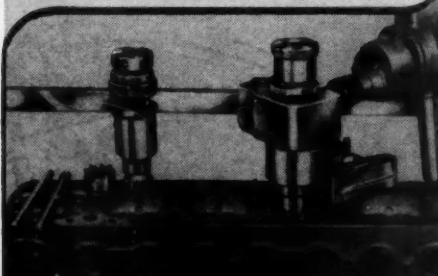
Eliminates the problem of counterbore accuracy!

Even the heavy-duty P-B Holddown Foot allows oversize cuts, but it doesn't matter BECAUSE THE COUNTERBORE IS THREADED. P-B seats exert no radial pressure—even under extreme heat—due to clearance in threads. They eliminate cracks in valve ports common to some engines. P-B seats will stay round, where pressed seat (especially with excessive interference) distorts quickly. This causes valve failure. P-B gives 2 or 3 times longer valve life, since it cools the valve evenly around the head, where 75% of the heat should be dissipated. Distorted pressed-seat doesn't cool valve. The valve stem grows and sticks in guide. Cocked pressed-seat definitely causes most broken valves.

| NORMALIZED | HEAT-TREATED |
|--|--|
| <p>Made of tough chrome-nickel-iron, individually cast under pressure. Unlike pressed-in seats, P-B Screw-In Valve Seats retain their original dimensions, won't buckle and come loose, can't tilt and cause hot spots and valve burning, and allow for perfect seating of valve on every stroke.</p> <p>Under heat, it expands outward and slightly downward, becoming tighter.</p> | <p>Mechanics say pressed-in seats look like this before they start grinding.</p> |

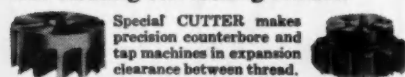
- SAVES COSTLY BREAKDOWNS—Eliminates 75% of valve burning, sticking, and breakage. Also eliminates 75% of valve port cracks due to radial pressure of expanding pressed-in seats—or valve port cracks in many heads where no seats are used.
- REPLACE MANY TIMES—You can replace

- P-B seats without damaging the threads in counterbore or going to an oversize.
- NEW-ENGINE VALVE MILEAGE—And the seat remains tight in the counterbore.
- EASY TO REGRIND—After long service just a light touch with the grinding stone cleans it up because it is not out of round.



PRECISION INSTALLATION EQUIPMENT

Patented tooling guarantees threads square with bottom of counterbore, thus insuring self-locking feature.



CONTACT YOUR MASTER SHOP TODAY

P-B Master shops are ready to help you solve your valve maintenance problems in every major U. S. city. Call him, or write direct.

PETERSON WELDING LABS. INC.

DEPT. C-3 1423 VIRGINIA KANSAS CITY, MO.

LA Transport Show

Continued from Page 8

developed by General Tire and Rubber Co.

2. "Flat Topper," a 35-ft flat bed truck with a Cummins diesel engine placed under the floor. Truck is made by Crown Body and Coach Corp.

3. Fruehauf Trailer Co.'s 40-ft semi-trailer of stainless steel with an adjustable gravity torsion under construction.

Most of the "big name" truck, trailer and equipment manufacturers exhibited.

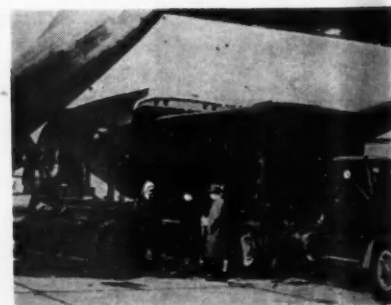
The show is sponsored by the Automotive Council of Los Angeles, Inc., with a major portion of the proceeds going toward an engineering scholarship at California Institute of Technology and a grant-in-aid planned for the University of Southern California.

A special feature of the show this year displayed heavy Army rolling stock and cars from the Yucca Flats atom bomb tests. Other special features included demonstrations by the Los Angeles chapter, National Safety Council, Los Angeles Civil Defense and Disaster Corps, and a continuous showing of films on trucking operations.

END

Please Resume Reading Page 89

Up In the Air



Going the imaginary "Flying Carpet" of Old Bagdad one better, more than \$1 million worth of fully-loaded and equipped air-transportable military truck-trailers will soon be flying through the air with complete photographic laboratories. Each of the air-transportable trailers will back up to the wide clam-shell doors of one of the U. S. Air Force's huge C-119 cargo planes, slide off its chassis and be swallowed up inside the plane with its entire cargo and equipment. Then the trailer chassis will be loaded into the same plane and off they will go into the wide blue yonder. The semi-trailers were completed at the Cincinnati plant of Trailmobile Inc., and passed road tests at the Army's Aberdeen Testing Grounds in Aberdeen, Md. Weight of the empty airborne trailer is approximately 7200 lb achieved by the use of aluminum.

Show

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August, 1953

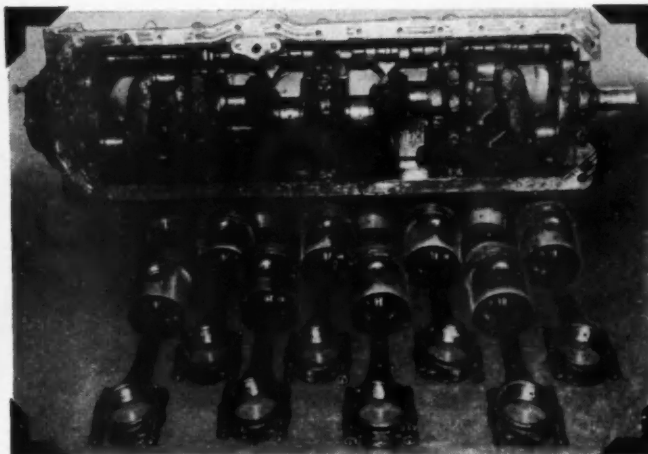
THE ENGINEER'S REPORT

| | |
|------------|--|
| DATA | RPM Delo Oils |
| LUBRICANT | |
| UNIT | 8 cyl. 165 H.P. gasoline engine |
| SERVICE | Suburban bus |
| CONDITIONS | Many traffic stops, cold engines, heavy pulls on hills |
| FIRM | The Gray Line, Inc. of San Francisco |

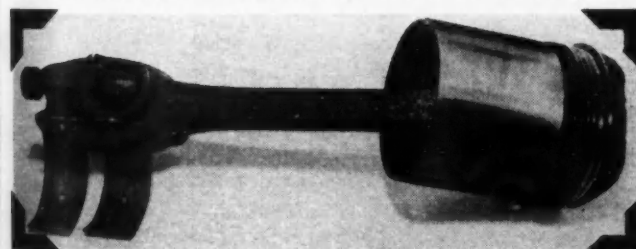
Over 83,000 stop-and-go miles before overhaul!



RPM DELO SPECIAL LUBRICATING OIL cuts operating costs by keeping engines clean and reducing wear in more than 400 busses and cars operated in the San Francisco Bay area by The Gray Line, Inc. Overhauled for the first time after 83,579 miles in hilly San

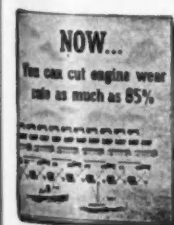


Francisco, the bus engine above showed only 0.0015 inch average wear on mains, only 0.009 average taper in cylinders...despite a heavy-traffic run, many stops



NO STUCK OR BROKEN RINGS were found on any of the eight pistons. Con-rod bearings were unscored and piston walls lacquer-free, as this photo shows.

REMARKS: Besides "Sightseers," Gray Line operates an airport limousine service, charter busses, chauffeured limousines and U-drive cars. Mr. P. J. McNamee, Mgr. of Operations, says, "RPM DELO Oil has reduced operating costs greatly by keeping our engines clean and reducing wear." There is an RPM DELO Oil to meet every heavy-duty engine operating condition.



FREE BOOKLET on the RPM DELO Oils gives you complete information. Write or ask for it today.

TRADEMARK "RPM DELO" REG. U.S. PAT. OFF.



How RPM DELO Oils keep engines clean and prevent wear



- A. Contain special additives that provide metal-adhesion qualities...protect parts whether hot or cold, running or idle.
- B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent piston scuffing.
- C. Special compounds stop corrosion of any bearing metal and foaming in crankcase.

FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your nearest distributor handling them, write or call any of the companies listed below.

STANDARD OIL COMPANY OF CALIFORNIA • San Francisco 20
THE CALIFORNIA OIL COMPANY • Barber, New Jersey

STANDARD OIL COMPANY OF TEXAS • El Paso
THE CALIFORNIA COMPANY • Denver 1, Colorado

... Equipment Lightens Bus Maintenance

Continued from Page 69

moved and a heavy chain is then used to link together the two heavy eyes which are an integral part of the cylinder head. The hoist hook engages the chain and lifting commences.

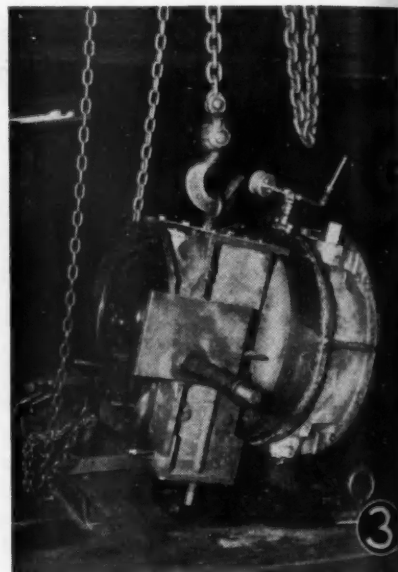
The hoist consists of three major parts: a Porto-Ram, which furnishes the lifting power; a jack and the hoist

framework which was built at a cost of around fifty dollars.

The framework consists of a top steel arm about three feet long constructed of 1/2-in. bar steel, suitably reinforced by cross members; a 5/16-in. steel pipe with a 3-in. inside diameter to which the hoist arm is bolted.

This post fits inside of and projects out of another slightly larger diameter post of about half the length. The inside post can be completely revolved inside of the larger post at will, a convenient feature because when the lift calls for a shorter jack than the one pictured, the post is turned about and the bottom of the short jack rests upon the steel base plate projecting out from the post and welded to it. It is held in position by means of the short "screw" bar seen immediately below the steel plate.

Transmission Lift



THIS jig saves a good deal of tough work in the shop when it is necessary to move heavy Spicer hydraulic transmissions, or Hydra-Matic transmissions, from a storage bench to the overhaul stand.

Built of heavy 1/2-in. steel plate and with its various parts either welded or bolted together, the jig fits over the part and transfer is made by means of a chain hoist. The bar projecting out from the jig as shown in the photo, fits into the overhaul stand.

END

Please Resume Reading Page 70



COMMERCIAL CAR JOURNAL, August, 1953



MILWAUKEE DUSTLESS BRUSH CO.
530 NORTH 22nd STREET, MILWAUKEE 3, WISCONSIN

Please ship the following:

| QUAN. | NO. | ITEM | PRICE |
|-------|-----|-------------------|-------|
| | 240 | Oblong Speed Wash | |
| | 250 | Round Speed Wash | |

FIRM NAME _____

ADDRESS _____

CITY _____ STATE _____

SIGNATURE _____

PRICES

OBLONG SPEED WASH
11" Diameter Back

ROUND SPEED WASH
5 1/2" Diameter Back

EITHER STYLE: Price each in lots of:

| | | | |
|---------|---------|---------|---------|
| 1 | 6 | 12 | 24 |
| \$12.45 | \$11.65 | \$10.90 | \$10.15 |

Complete with 5' Handle

Head Only

\$ 8.50 \$ 8.00 \$ 7.50 \$ 7.00

Postpaid if check accompanies order.

MAIL THIS COUPON TODAY!

NOW! Wash More Trucks per Hour
And More Trucks per Brush

Every part of the Speed Wash is designed for easy handling, top performance and long service. Speed Wash bristles are soft and resilient (50% Nylon, 50% Select Horsehair) to prevent tangling and matting. The tufts are fastened with rust-proof wire; they cannot come out or come loose. The block is water-proof mahogany plywood. The steel back is water-tight and surrounded with a mar-proof rubber bumper. The steel handle is light-weight and zinc-plated inside and out.

These and other features put Speed Wash in a class by itself, the quality fountain brush of the trucking industry. Thousands of fleets prefer Speed Wash. We know you will, too. In fact, we guarantee it.

ORDER ON THIS GUARANTEE

SPEED WASH brushes are guaranteed to be exactly as represented. Your money will be refunded in full including shipping costs, if they do not give complete satisfaction and are returned within 10 days.

SPEED WASH



MILWAUKEE DUSTLESS BRUSH CO. 530 N. 22nd ST., MILWAUKEE 3, WIS.

Bendix-Eclipse

BRAKE BLOCKS AND LININGS



The Most Trusted Name in Braking ASSURES DRIVER SATISFACTION

Since practically the beginning of the automotive and trucking industry, the name "Bendix" has been the accepted standard for *better braking*. That's because Bendix products for braking have always proved superior to all others in their field.

That's why, too, you can be sure your drivers will be completely satisfied with Bendix-Eclipse* Brake Blocks and Linings when you install them on your vehicles. They know that in pedal ease and stopping ability they're tops because that is the only standard to which Bendix products are built. Make a note now to *specify* Bendix-Eclipse Brake Blocks and Linings for all the trucks in your fleet. Your own records will prove their superiority.

*TRADE-MARK



MARSHALL-ECLIPSE DIVISION OF
TROY, NEW YORK



New Product Descriptions

Continued from Page 92

P22. Piston Ring Set

The newly developed "Krome-Oil" piston ring set, announced by American Hammered, helps solve the piston ring problem of break-in by the process of "pre-seating." "Pre-seating" is a precision lapping process applied to the top groove compression ring at the

factory. It is equivalent to three to five hundred miles of actual engine operation. It provides a narrow contact surface of smooth, even bearing which guarantees quick seating and fast control. The face of this ring is machine threaded. These threads carry a thin film of oil which provides lubrication during the break-in period. In

addition, the steel oil ring in the piston ring set has chrome-faced steel rails.

P23. Refinishing Oven

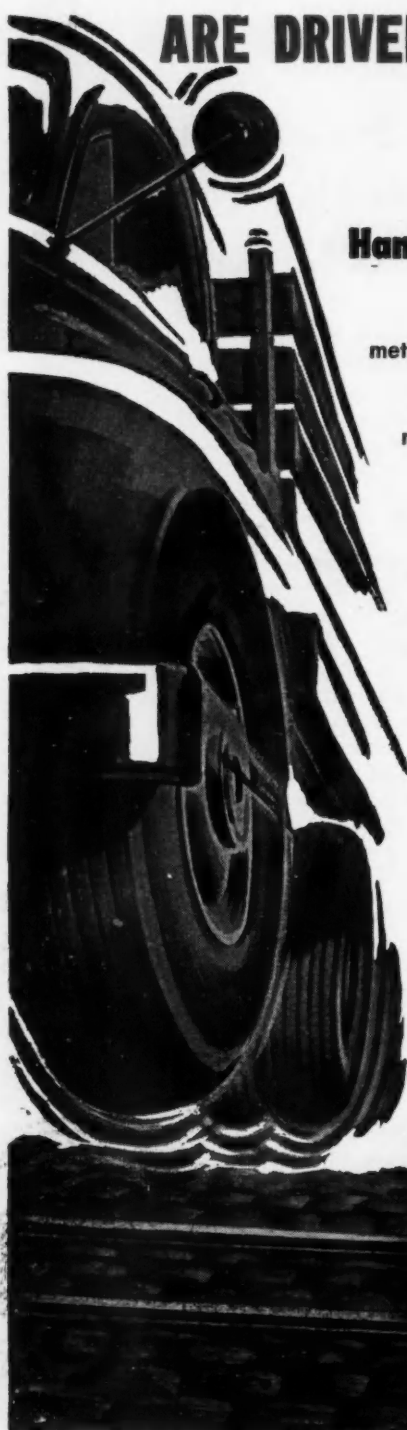
Michigan Oven Co., Detroit, announces the introduction of its first automotive refinishing baking oven. It is available for heating by gas, electricity, or steam. The hot air is blown in through intake-out-take ducts protruding from the ceiling of the oven. When sufficient temperature has been reached, cool air is released through the same ducts, thus helping to cool down the job. They feature the use of ribbon heaters for fast heat response, long life, and accurate control of temperature.

P24. Pressure Booster

An air-operated, automatic "pressure charger," to be used in conjunction with piped high pressure lubrication systems to gain efficiency and cut lubrication time, has been announced by Alemite division, Stewart-Warner Corp., Chicago. Installed in the line near the delivery hose, the device is designed to provide rapid servicing of all high pressure lubrication points and overcome any problems that may develop from long pipe lines, low temperatures or "tough" lubricants. In operation, it will provide 6000 lb of lubricant pressure at the control valve, when used with 125 lb or more of air pressure and as long as the supply pump delivers lubricant to it.

P25. Aerial Grinder

A new aerial grinder, available in three grinder sizes, is announced by Mall Tool Co., Chicago. It has an aluminum alloy housing. Ball bearings are used throughout. Commutator and switch are fully enclosed to keep out dust and shop grit. The 6 by 1 in. wheel has a 5/8-in. hole, spindle speed of 3730 rpm free; the 5 by 1 in. wheel (TURN TO PAGE 132, PLEASE)



ARE DRIVERS "RAILROADING" YOUR VEHICLES?

Handy Governors Will Stop It

Any driver is likely to be less than meticulous in his care of a vehicle he doesn't own. Many feel no compunction about "railroading" your vehicles. Drivers do most of their work away from supervision . . . abuses are hard to correct.

Handy Governor will stop "railroading" — stop practices which run up costs and wear out vehicles before their time.

The savings in tire, fuel, and lubricant costs, engine repairs, brake maintenance and general maintenance are spectacular. Reduced accident and insurance costs are equally important.

Let us show you some figures on savings — and tell you how little it costs to get them.



KING-SEELEY CORPORATION

ANN ARBOR, MICHIGAN

PLANTS AT
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Thermoid means safer stops in any weather

The secret is Thermoid's patented Dry Mix Process, originally developed for heavy duty amphibious military vehicles.

Thermoid Brake Blocks withstand highest operating temperatures . . . won't "grab" when wet . . . provide dependable, uniform friction at all times.

Throughout their extra long life, they meet the most rigid stopping tests. Despite their rugged construction, they won't score or wear your drums.

Get details on Thermoid's fleet survey plan, designed to provide maximum safety at lowest cost per mile. Ask your jobber or write direct.

Thermoid

Thermoid Company • Trenton, New Jersey

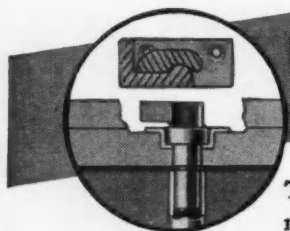
the standard of precision
processing in brake lining,
brake blocks, hydraulic fluid,
cylinder assemblies, hydraulic
brake parts.



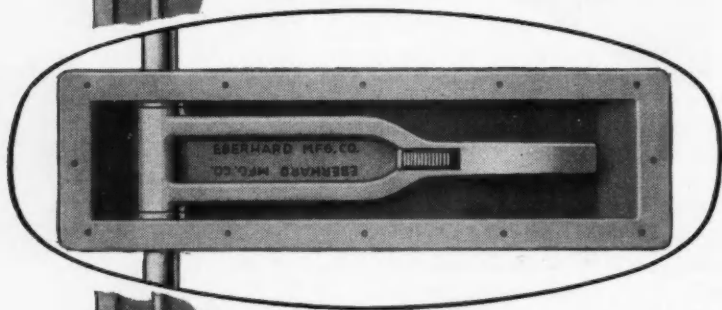
First Mass Shipment

Dating back to 1868, this painting shows a train load of stage coaches enroute to Wells, Fargo & Co. at Omaha, Neb., probably one of the nation's first intercity "fleet operators." The shipment consisted of 30 coaches on flat cars and four box cars of repair parts. The entire shipment was valued at \$45,000.—Illustration courtesy of the History Room, Wells Fargo Bank & Union Trust Co., San Francisco.

The Demand for— INCREASED TRUCK BODY PAYLOAD SPACE...



prompted the design of this new flush-type installation lock. The **SPECIAL RECESSED FEATURE** permits building the vehicle to the **GREATEST LEGAL WIDTH** for **MAXIMUM CARGO SPACE**, on side door installations.



The new **(E)** No. 5660 lock embodies all the excellent features of the popular "Clamptite" and Eber-"Grip"-Hard locks used with tremendous success by body builders everywhere.

Built for long service-life with smooth, positive cam closing action. Thumb-trigger release contains hole for padlock and seal.

Furnished in right and left hand models.

Ask for the
Eberhard
Catalog.



EBERHARD *Long Run* TRUCK BODY FITTINGS

EBERHARD MANUFACTURING CO.

Division of the Eastern Malleable Iron Co.

EVARTS AVENUE

CLEVELAND, OHIO



New Products

Continued from Page 130

has 1/2-in. hole, spindle speed of 4430 rpm; the 4 by 1 in. wheel has 1/2-in. hole, spindle speed of 5560 rpm. It weighs 12 lb. Dimensions are: length—22 in., width—4.75 in., height—4.5 in.

P26. Fire Extinguisher

For protection against incipient Class B and C Fires, the American-LaFrance-Foamite Corp., Elmira, N. Y., is now providing a new 1 qt. trigger-operated fire extinguisher. The new Alfco Model No. PCB-1 is a stored pressure unit charged with bromochloromethane, more commonly known as "CB" liquid. This new fire extinguisher is a light-weight unit, designed for one-hand operation on Class B and C fires. It can be aimed like a gun. It hits the fire target accurately with no unnecessary loss of liquid. For repressurizing, a standard air chuck may be used.

P27. Hand Torch



A new hand torch burning natural gas, butane or propane with compressed air or oxygen has been announced as available from

Tonea Hamilton and Associates, Los Angeles, Calif. It weighs 12 oz and various tips for flames from 2 to 10 in. are available. Says the announcement, it can be used for brazing, tin smithing, 18-20-22 gage light welding, light alloy welding, lead burning, soldering and cutting.

P28. Condenser Tester

Lee Electronic Labs., Inc., Boston, Mass., announces the availability of a new electronic condenser tester and leakage indicator, Model No. CT-1. This new unit features a built-in electronic (TURN TO PAGE 134, PLEASE)

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KOLD-HOLD truck refrigeration WILL PAY FOR ITSELF!

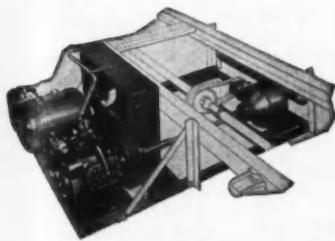
How would you like to finish an entire season without loss from spoilage? Every time you incur a spoilage loss you are taking a trimming . . . you're scraping profits into the garbage pail.

Actually you're paying for Kold-Hold truck refrigeration now . . . why not enjoy its advantages? You not only save spoilage losses, but your trucks can make longer hauls. They can carry a full day's load to save time and manhours and make trips more profitable. Full flavor is retained so that you assure complete customer satisfaction. These benefits mean that dependable Kold-Hold truck refrigeration will pay for itself.

For example, one user reports: "Kold-Hold has saved us \$10,500 in less than six months."

When the weather is stacked against you, don't gamble. Don't invest in half satisfaction. Be sure you specify Kold-Hold dependable truck refrigeration that maintains pre-determined low temperatures and keeps truck bodies clean, dry and sweet smelling even on the hottest days.

KOLD-HOLD can answer any truck refrigeration problem!

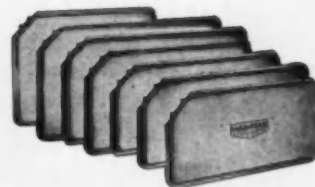


KOLD-TRUX

Which do you prefer . . . Mobile or Hold-Over truck refrigeration? Kold-Hold can give you either or a combination of both.

When your weather worries start, pick out the routes with the biggest refrigeration problems and call on Kold-Hold to give you a satisfactory solution. They will give you the right combination for your needs from such highsides as the Kold-Trux Mobile Unit, a mounted compressor, or make-and-break assemblies, coupled to such lowsides as Kold-Hold Hold-Over Plates, Thin Plates, Serpentine Quick-Action Plates, or Blowers.

Why not give us the details of your problems and let our engineers find the most efficient solution for you. Write today for details.



HOLD-OVER PLATES



Tell us your truck refrigeration problems and send now for complete data and literature.

KOLD-HOLD

New Products

Continued from Page 132

power supply providing both AC and DC test voltages and contains miniature selenium rectifier and dual capacitor RC filter network in a special circuit with a highly sensitive neon lamp leakage indicator. It permits quick, accurate, direct testing of condensers for leakage with actual DC voltage applied and readily indicates intermittent open condensers with AC applied. Complete

with 6 ft power cord and rubber plug, kinkless test lead and detailed instructions.

P29. Sander-Polisher



A new, transitory action sander-polisher for smoothing and filling base metal, feathering and polishing primer and all types of painted surfaces, for rubbing out overspray on enamel less than 48 hours old, and for finished wax and

polish jobs has been announced by Cyclo Mfg. Co., Denver, Col. Counter-balanced heads eliminate centrifugal action. No special bonnets are necessary and regular wiping cloths may be used for wiping up and final finishing. Equipment weighs approximately 8 pounds and is available in either air or electrically operated models.

P30. Engine Breather

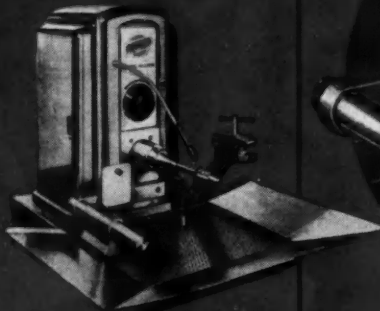
A new breather for engine crankcases, gear boxes, fuel tanks, hydraulic systems and similar applications to increase dust filtration capacity and minimize back pressure through special design of the filter element has been announced by Crenlo, Inc., Rochester, Minn. It is available in 1/8 to 2 in. pipe sizes and furnished in steel, aluminum or monel metal.

P31. Brake Fluid Dispenser

M & H Products, Automotive Division, Speedmaster Engineering, San Leandro, Calif., announces the "See-Level" visible brake fluid indicator and dispenser. It shows the level of brake fluid and serves as an auxiliary master cylinder. Brake fluid goes into the visible container under the hood of the car. Brake fluid supply is checked every time the hood of the vehicle is raised.

P32. Vise Jaws

A variety of special vise jaw faces for use with standard machinists' vises is announced by The Columbian Vise and Mfg. Co., Cleveland, Ohio. These include smooth jaw faces of hardened steel to protect soft materials and finished surfaces and copper non-sparking, non-magnetic faces. Special faces to fit irregular shaped pieces are also (TURN TO PAGE 136, PLEASE)




**Fit and Align
at the
Same Time
with
AMMCO
HONING
MACHINES**

MOBE 2300
WET HONING MACHINE

Most connecting rods are not bent or twisted enough to need straightening — when the pins are fit on an AMMCO HONING MACHINE. Hone them to a precision fit and, when checking, you will find the bearing and bushing ends of the rod are parallel — all in one easy operation. Save time. Prevent troubles caused by straightened rods resuming part of original distortion after pinfitting.

Dual operation is performed by holding journal end of rod against patented sliding guide. Face of guide and Honing Head are at perfect right angles. Heavy construction assures permanent accuracy. Write us for a demonstration in your own shop.

Play safe with Ammco — The Big Buy!



AMMCO TOOLS, INC.

2118 COMMONWEALTH AVENUE • NORTH CHICAGO, ILLINOIS



COMMERCIAL CAR JOURNAL, August, 1953

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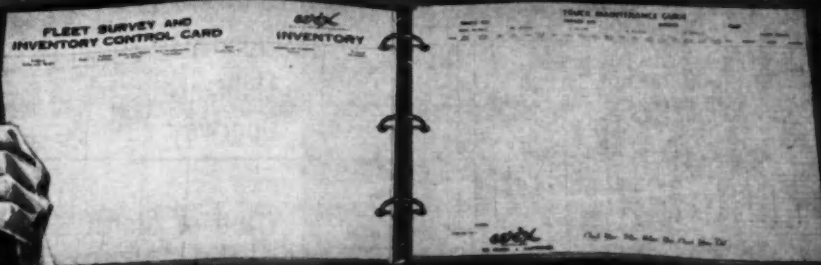
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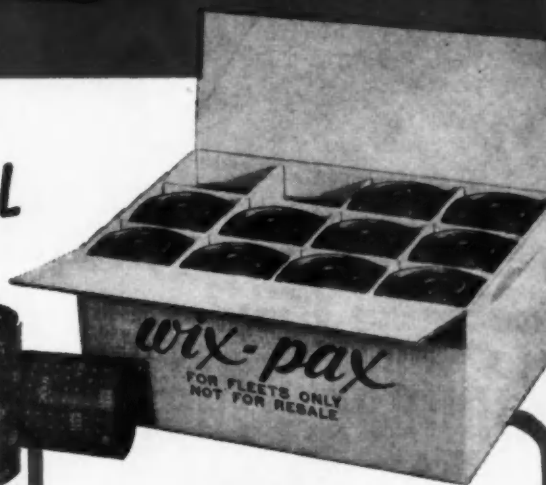
KNOW-

HOW YOUR VEHICLES STAND WITH THIS NEW FLEET SERVICE MANUAL



Free WITH YOUR INITIAL WIX-PAX ORDER!

Here's the whole story on every payload unit at your fingertips . . . performance, repairs, maintenance . . . all in a nutshell. The new WIX Fleet Manual shows at a glance what's been done and what's coming up on your maintenance schedule. You can't forget oil and filter changes, lube schedules, brakes, fan belts, points or other parts needing periodic change or inspection. The Fleet Manual keeps your maintenance on the ball . . . saves time for you, money for your fleet. Your copy of the Fleet Manual comes absolutely FREE with your first WIX-PAX order. And WIX-PAX means real economy in oil filtration — WIX HEVI-DUTY Oil Filter Cartridges at the special, low price available only to fleets. Call your Jobber or clip and mail this coupon today. You'll get all the details of this time and money-saving offer.



WIX-PAX SERVICE FOR FLEETS

You can chop dollars off your oil filtration costs with this money-saving WIX-PAX Service! It brings you genuine, top grade WIX Filter Cartridges direct from the factory or nearest warehouse . . . in full cartons (12 Can Type, 12 or 24 Sock Type) in PREPAID shipments of 100 lbs. or more. Order through your local WIX Wholesaler for direct factory shipment.

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OIL FILTERS CARTRIDGES

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I am interested in receiving a WIX Fleet Manual and further particulars of your money-saving WIX-PAX Service. Please send complete information.

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Company _____
Address _____
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No Overhead
Space Lost

No Wall
Space Lost

Opened Door
Clears Entire
Doorway

Wind or Storm
Can't Damage Doors
— Open or Closed!

because they're Kinnear Steel Rolling Doors

You can see some of the many advantages Kinnear Rolling Doors bring to all types of service opening in this warehouse installation.

Coiling compactly above the lintel, Kinnear Rolling Doors never get in the way of the overhead conveyor. And since they need no wall space for either storage or operation, posts, walls, windows or other doors can be placed flush with the door jambs on both sides of the opening.

These and other space-saving conveniences are in addition to the long-wearing ruggedness, fire resistance, and protection of Kinnear's



interlocking steel-slat curtain. Their coiling action is also ideal for motorized, push-button control.

Kinnear Steel Rolling Doors are built to fit opening of any size, in any building, old or new. Write today for full information.

The Kinnear Manufacturing Co.

Factories:

2100-20 Fields Avenue, Columbus 16, Ohio
1742 Yosemite Ave., San Francisco 24, Calif.
Offices & Agents in All Principal Cities

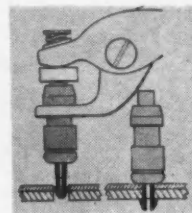
KINNEAR
ROLLING DOORS
Saving Ways in Doorways

New Products

Continued from Page 134

available. Any of the faces can be easily inserted in Columbian machinists' vises.

P33. Metal Fasteners



Metal or hard surface parts containing drilled or punched holes can now be temporarily held together in alignment and under pressure when combined materials are as much as four inches thick by metal fasteners announced by Wedglock Co., North Hollywood, Calif. These tools hold materials such as templates, jigs, sheet metal, small fittings, etc., in place during drilling, riveting, fabrication and assembly. They are applied from one side of the work and can be used over and over again. Both spring actuated and hand operated wing nut type are available in a variety of sizes and capacities.

P34. Fire Extinguisher



Mounted on 4 in. hard rubber wheels, with thumb-trigger release, a new 26 lb carbon dioxide fire extinguisher has been announced by Randolph Laboratories, Inc., Chicago. It can be speedily moved to any location. Simple thumb-pressure on trigger sends non-damaging, carbon dioxide through ten feet of hose and nozzle over the flames in a 20 foot sweeping arc. Release of trigger stops the flow, saves the remainder of the charge. Lock-down yoke on trigger holds valve open if desired. It is Underwriter's approved.

P35. Paint Screen

A fine gage brass screen strainer for paint spray guns to eliminate slugs, clogging and spitting has been announced by Clear-flo Strainer Co., Seattle, Wash. It slides over the end of the intake tube of the spray gun permitting only pure, strained finishing material to reach the nozzle and the even flow as—
(TURN TO PAGE 140, PLEASE)

Another trucking company proves
that your best investment for
high safety and low maintenance
costs is an ASF Safety 5th Wheel...

"What counts with us is Positive Coupling"

While it's true that accidental uncoupling of any trailer is no joke, it just seems to go double when you're hauling tons of chemicals or acids. With that kind of payload there simply can't be any compromise with safe, positive coupling.

V. D. Ecoff, President of Ecoff Trucking Inc., operating out of Fortville, Indiana, has practically all his tractors equipped with ASF Safety 5th Wheels... and has this to say about their performance:

"We used to have trouble with 5th wheels because of wear and looseness, but since we started buying ASF wheels we've licked the problem. What counts with us is positive coupling, as proved by the time a train hit one of our tanks and carried it $\frac{3}{4}$ of a mile. Your 5th wheel pulled right off of the tractor without uncoupling.

"Believe it or not, we're now using that same ASF wheel on another tractor."

Naturally, Mr. Ecoff would be the last one to recommend an accident as a standard test for 5th wheel coupling

strength. But it does prove that ASF 5th Wheels are built to take just about anything that heavy loads and tough service can dish out.

The strength and ruggedness of ASF 5th Wheels pay off with higher safety... and with low maintenance costs during everyday operation! Get all the facts on the best 5th wheel investment you can make. Write us for information—and name of your nearest ASF Distributor. American Steel Foundries, Automotive Division, 410 North Michigan Avenue, Chicago 11, Illinois.

Make an investment in safety...with

ASF
safety 5th wheels

ASF Safety 5th Wheels

A 3000-pound "compression-grip"
saves your maintenance dollars...



COUPLING—as the king-pin enters the jaws, the jaws are forced back against the exclusive ASF rubber buffer block, building up compression.

COMPRESSING—3000 pounds are built up before the lock clears the rear jaw, allowing it to snap to locked position.

LOCKED—and the jaws remain under compression. The grip is like a vise; eliminates the slack and backlash that can cost you money in added 5th wheel and king-pin wear.



A quick glance tells you the
lock is locked...

LOCKED—as quickly shown by the lever and safety latch—which can only be in these positions when the jaws are truly locked.

UNLOCKING—with an easy twist of the wrist. Simply move the safety latch up, and pull and lever forward.

UNLOCKED—ready for uncoupling; parts in lockset position. Handle can only move back to locked position when jaws are locked in next coupling operation!





Long and Skinny

Maximum protection in case of collision is provided in new engineering developments incorporated in a giant tank-truck trailer recently completed for the transport of propane gas, a highly-inflammable product. Built by Trailmobile Inc., Cincinnati, Ohio, at its tank-trailer plant in Springfield, Mo., to special specifications for the Pyrofax Gas division of Union Carbide and Carbon Corp. There is a minimum of pipes, valves, and joints and they are arranged for greatest possible protection in case of collision. The twin tanks hold 5000 gal of liquid propane

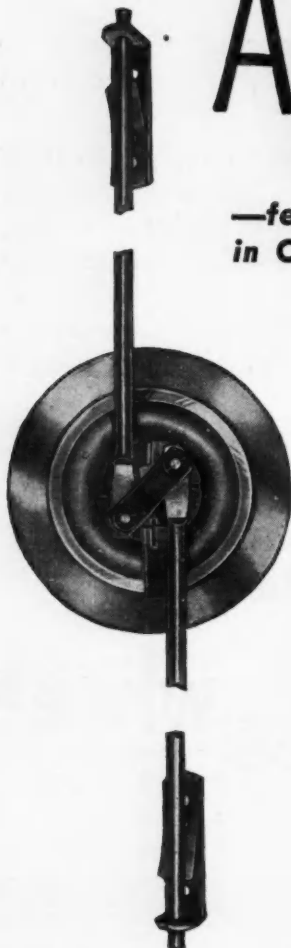
ANNOUNCING

A few of the NEW **HANSEN Products**

—featuring NEW designs
in ONE-UNIT Locks

EASIER TO APPLY—simpler in design—more adaptable—faster operation—smoother performance—added dependability—HANSEN NEW ONE-UNIT Locks have features that appeal alike to designer, builder, user.

INCLUDED are—Lock with handle, rods, mechanism in ONE unit—Lock and Flush Handle in ONE unit—Tool Box Lock and Handle in ONE unit. ALL these and other Hansen products illustrated and described in FOLDER NO. 90. SEND FOR YOUR COPY!



106-L LOCK. Handle, operating center mechanism and rods combined in ONE unit. Lock includes handle, rods and guides. Unit comes complete, ready for instant installation. The 79 series Flush Handle (79-L, 79-M, 79-S) and the 81 series (81-L, 81-M, 81-S) are available for use with this Lock.

46-H TOOL BOX LOCK. Handle integral with bushing and locking bolt. Easily applied to wood or metal. Strong, compact, light weight, it finds ready use on ALL TYPES of small doors, for commercial or industrial use. Size of Lock, 3" x 1". Weight, 1/4 lb.



42 LOCK. Made especially for use with Flush Handle. Bushing is located 4" from end of Lock, for adapting Lock to Flush Handle use. Lock is also usable with T Handles, Curved and Offset Handles. Can be applied to small and medium-size doors. Lock is made of heavy-gauge steel.

**REQUEST
FOLDER
NO. 90**

A. L. HANSEN MFG. CO.
5047 RAVENSWOOD AVE., CHICAGO 40, ILL.



New Products

Continued from Page 136

sure a smooth and clean paint job. Manufactured of fine brass screening, precision-made so there can be no leaks or breaks at any joint the strainer eliminates the use of nylon or other materials to strain the paint or finishing material before using.

P36. Shop Press

New 30 ton press made by Owatonna Tool Co., Owatonna, Minn., features an open throat which permits easy entry and removal of work from the press. The center hole ram with which this pump is equipped is activated by a remote control 10,000 psi pump complete with 6 ft of high-pressure hose. The hydraulic ram is easily and quickly detached from the press for use with standard OTC Grip-o-matic Pullers and Push-Pullers permitting dual service for field or shop maintenance operations.

P37. Stop Lights

Two heavy duty stop and rear lights have been announced by K-D Lamp Company, Cincinnati, Ohio. An entirely new lens is said to give light output three times that from the old KD 200 stop and rear lite. Two models are available, No. KD B201 with universal slotted bracket mounting to fit all bolt centers and No. KD B200 with the improved lens mounts on 1/4-in. bolts spaced 2 in. apart. Both have heavy bonderized steel construction, are 4 1/8 in. dia and 2 5/8 in. depth. Both have detachable plug assembly and also ready-to-splice pigtails, and 21-3 cp bulbs.

P38. Refinishing Tools

Two new accessory products for automotive refinishing and repair shops were

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rust, 1953



Another First for Thompson

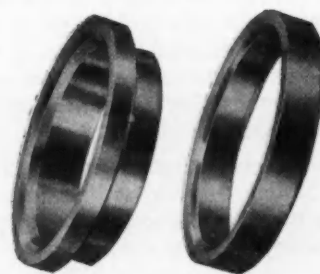
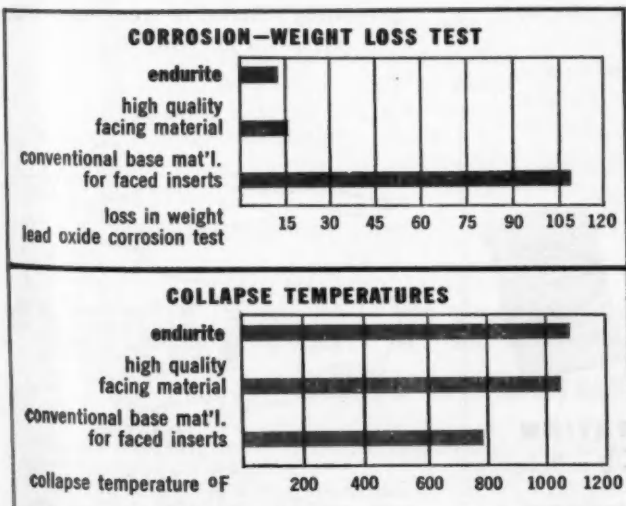
Thompson, which pioneered in the development of super-hard, heat resisting alloys for valve seat inserts now has engineered a new, even better valve seat material—*Endurite*.

Endurite has all of the properties of the best heavy duty valve seat facing materials *plus* superior lead corrosion resistance *plus* superior resistance to insert seat collapse or loosening.

Seats made of Endurite stay tight in the cylinder head or block and also permit more regrinds, since Endurite is not used as a facing only. The *entire* seat is Endurite.

If you have a valve seat insert problem in your gasoline, diesel or propane engine, write or phone Special Products Division, Thompson Products, Inc., 2196 Clarkwood Road, Cleveland 3, Ohio.

These charts indicate Endurite superiority over other types of materials used in valve seat insert manufacture.



You can count on
**Thompson
Products**

SPECIAL PRODUCTS DIVISION

New Products

Continued from Page 140

announced by Minnesota Mining and Mfg. Co., St. Paul, Minn. They are a new disc feather-edger, and a new cone mandrel. Each is adaptable for use on all standard grinders and polishers. The disc feather-edger comes in a 6 and 8 in. size, and consists of a thick, wool-pile feather-edger and a quick-change slip nut. Its specially tapered design permits up to 90 per cent of the

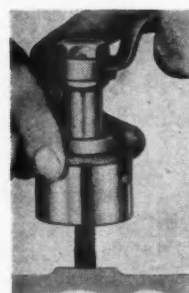
feathering disc's surface to be utilized. The new cone mandrel is especially designed for grinding and finishing sharp curves and hard-to-get-at places such as fender curves, window moldings, trunk lids, and back deck panels. It consists of an extension attachment, sanding head, and mandrel.

P39. Drum Safety Vent

"Vent-A-Drum," a new safety valve designed by the Central Safety Equipment Co., Philadelphia, to control and

prevent explosions caused by pressure expansion in 50 gal metal drums containing flammable liquids, has just been approved by the Factory Mutual Laboratories. The approval covers the use of Vent-A-Drum on drums containing all flammable liquids with the exception of Carbon Disulphide and Diethyl Ether. Easily screwed into the bung opening of a standard 50 gal metal drum by hand, it functions through a series of six automatic actions: (1) It permits entry of air into drum when liquid contracts or is being withdrawn; (2) it allows air to escape slowly when normal temperature causes the liquid to expand; (3) it relieves excess pressure quickly when fire or unusual heat causes liquids to build up vapor pressure; (4) it automatically resets and shuts off flow of vapor as soon as pressure is relieved; (5) fire screens inside the Vent-A-Drum prevent entry of fire into the drum; and (6) should the drum turn over, Vent-A-Drum automatically seals off all flow of vapor and liquid.

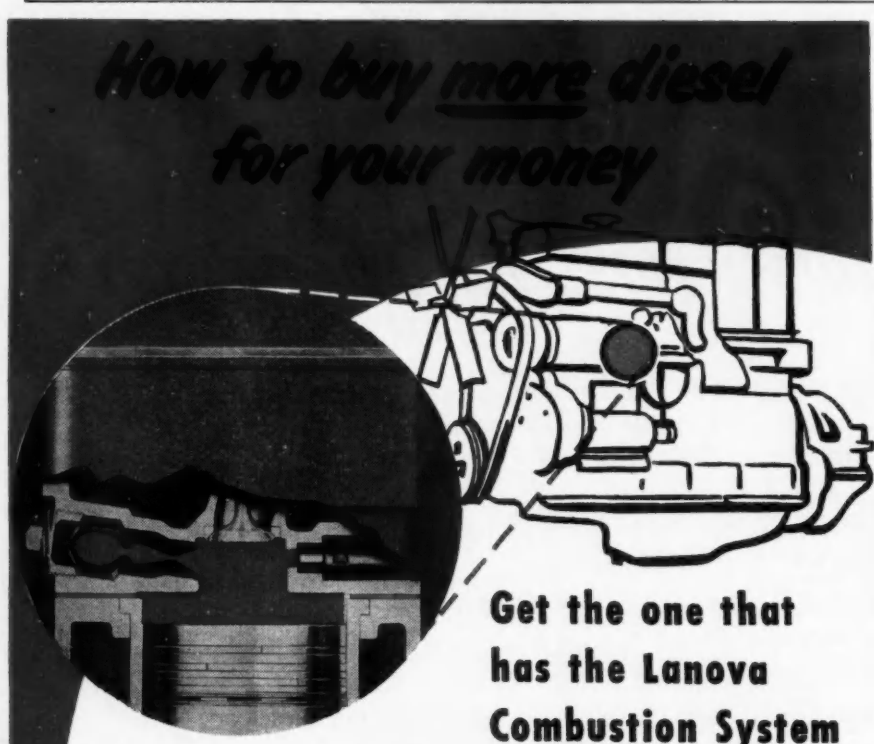
P40. Stud Wrench



A new Stud wrench has been announced by Clark - Feather Mfg. Co., Fort Morgan, Col. With ratchet action built in, the tool comes in two sizes to handle any OD from $\frac{1}{4}$ through $\frac{3}{4}$ in.

SW-1, with capacity through $\frac{1}{2}$ in., takes either internal $\frac{1}{2}$ -in. square, or external 1-in. hex drive. SW-2 takes $1\frac{1}{4}$ -in. external hex drive and is hollow to accommodate any length stud. Its capacity is $17/32$ to $\frac{3}{4}$ in. inclusive. The overall diameter of SW-1 is 2 in., permitting removal of studs only 1 in.

(TURN TO PAGE 144, PLEASE)



You'll get more "payload" power at less cost with a Lanova-type diesel. That's because the Lanova Combustion System—developed especially for modern high speed engines—is designed to get more work out of every ounce of fuel used. It does this by promoting peak combustion conditions in the cylinder and by timing and controlling the application of cylinder pressures to take full advantage of the piston's working thrust.

Chances are—the engine you're now considering has the Lanova Combustion System, because its outstanding advantages have led many leading diesel manufacturers to adopt this design. But, before you make any decision, it will pay you to . . .

Send for the Lanova handbook—This informative 58-page handbook has full details on the important role combustion plays in efficient low-cost Diesel performance. Write for it today.



LANOVA CORPORATION

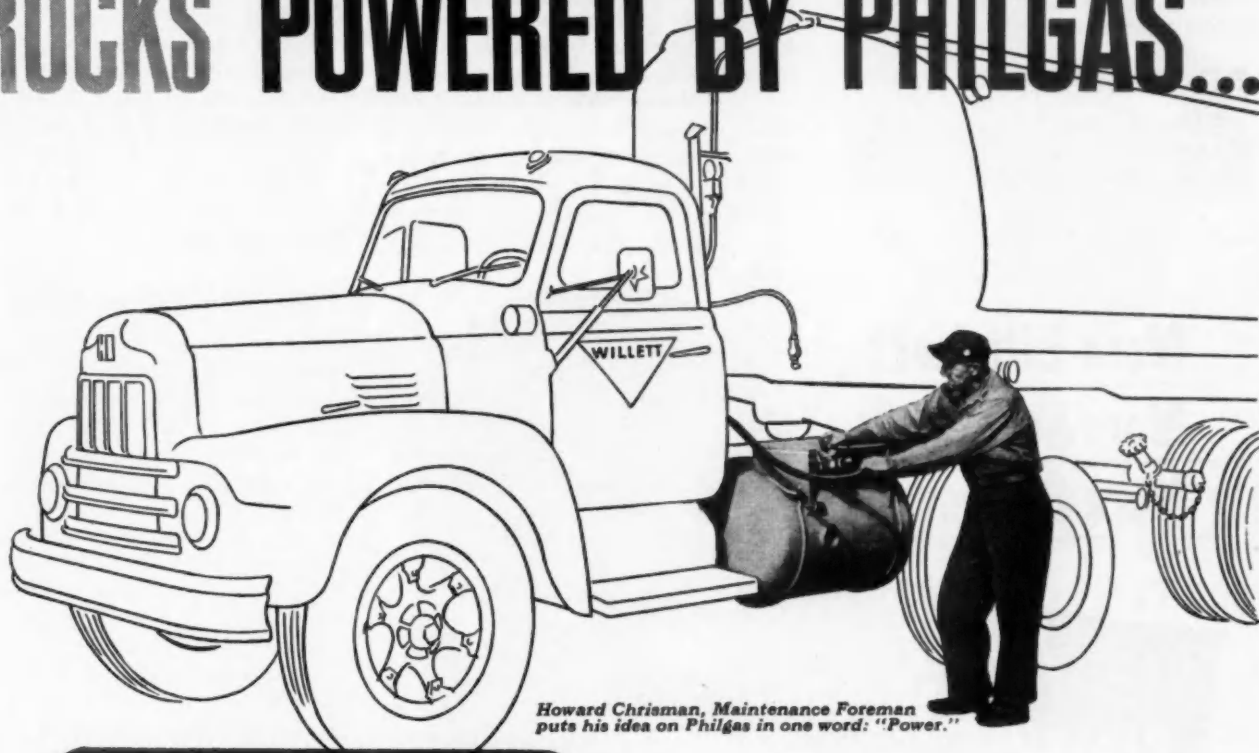
Dept. 1, 38-15 30th Street, Long Island City 1, N. Y.

One of America's foremost names in diesel research and development



COMMERCIAL CAR JOURNAL, August, 1953

WILLETT COMPANY ORDERS 23 MORE TRUCKS POWERED BY PHILGAS*



Howard Chrisman, Maintenance Foreman puts his idea on Philgas in one word: "Power."

CHECK THESE PHILGAS ADVANTAGES

- ✓ Burns completely with no oil dilution—less contamination
- ✓ Low fuel cost—lowers operating costs
- ✓ Lower cylinder wear—no cylinder wall washing
- ✓ Longer ring and valve life
- ✓ Cuts maintenance costs—thousands of miles more before overhaul
- ✓ Quieter—no smelly fumes or exhaust smoke

Put Philgas to work for you. You can use it to advantage no matter what type of fleet you operate. Write for complete details.

The proof of any product is user satisfaction. And here's true evidence of it. The Willett Company, Chicago, Illinois, has ordered more trucks to be powered by Philgas. They've tried Philgas, road tested Philgas—and want more of it.

Like Willett, you'll find Philgas means power plus savings. It has proved its value in trucks, buses, construction equipment and taxi cabs. It can be used successfully wherever internal combustion power is needed.



*Philgas is the Phillips Petroleum Company trademark for its high quality LP-Gas or bottled gas (butane, propane).

PHILLIPS PETROLEUM COMPANY

SALES DEPARTMENT, Bartlesville, Oklahoma

Offices in: AMARILLO, TEX.—First National Bank Building • ATLANTA, GA.—1226 Candler Building • CHICAGO, ILL.—7 South Dearborn
DENVER, COLO.—2185 Broadway • DES MOINES, IA.—Hubbell Building • PONTIAC, MICH.—2635 Orchard Lake Road
INDIANAPOLIS, IND.—1112 North Pennsylvania St. • KANSAS CITY, MO.—500 West 39th St. • MILWAUKEE, WIS.—Jones Island
MINNEAPOLIS, MINN.—212 Sixth St. South • NEW YORK, N. Y.—80 Broadway • OMAHA, NEB.—WOW Building
RALEIGH, N. C.—16 W. Martin St. • ST. LOUIS, MO.—4251 Lindell Boulevard • TULSA, OKLA.—21st and Utica • WICHITA, KAN.—501 KFH Building

New Products

Continued from Page 142

apart. SW-2 is 1/2 in. larger. An advantage of this stud wrench is the absence of collets to hunt before pulling a particular stud.

P41. Shop Press

A new hydraulic shop press capable of developing 17 1/2 tons has just been announced by the Owatonna Tool Co.,

Owatonna, Minn. It is equipped with the 17 1/2-ton "Power-Twin" ram which serves a dual purpose since it can easily be detached from the press and used as a portable power unit. This unit is readily attached to the company's Grip-o-matic Pullers and Push-Pullers for field or shop maintenance operations and can be used as a lifting jack as well. The press comes equipped with the new hydraulic hand pump which develops 10,000 psi and a 6 ft high pressure hose connects the pump and ram. A 15,000 psi gage is sup-

plied to provide actual pounds or tons pressure used.

P42. Welding Electrode

A new, easy operating, mild steel E-6010 electrode, "Fleetweld 51," has been put on the market by The Lincoln Electric Co., Cleveland, Ohio. It is a shielded arc electrode designed for all position welding with DC. It is especially well suited for "vertical up" welding. It may also be used with excellent results for welding galvanized, dirty or rusty plate and welding pipe in all positions.

P43. Fire Extinguisher

A new stored-pressure type vaporizing-liquid fire extinguisher is announced by Kent Extinguisher Co., Grand Rapids, Mich. It is easy to operate and has a simple "trigger-action" with only one moving part. No pumping is necessary as the unit is operated on "stored-pressure." Accurate spotting of the extinguishing liquid can be made up to and beyond 30 ft. This new extinguisher features a shell spun from solid brass with end fittings welded on and the unit has been tested at 1800 lb pressure for a safety factor of 18 to 1. The extinguisher is impervious to low temperature and carries the Underwriters and Factory Mutual labels.

P44. Fuel Tank

The Lintern Corp., Painesville, Ohio, has announced production of a new step tank for gasoline or diesel fuel, designed for as much as 850 lb increased payload. Use of Lintern Step Tanks transfers up to 75 per cent of tank and content weight from the rear to the front axle. Mounting brackets of formed steel are integrally welded to the tanks and are suspended from eight mounting studs. They are designed to be suspended from one chassis member, eliminating need for horizontal or secondary vertical suspension. They are included in the Underwriters' Laboratories Inc. periodic inspection plan and are manufactured and inspected in accordance with specifications of the Bureau of Motor Carriers, Interstate Commerce Commission.

P45. Clutch Bonding

A complete new line of high-speed clutch bonding equipment is being manufactured by Westbrook Industries, Inc., Newark, N. J. Hydraulic pump with gage and clutch adapter gives positive pressure which is evenly dis-

(TURN TO PAGE 146, PLEASE)

More Efficient!
More Accurate!
More Dependable!



NEW Stewart-Warner ELECTRIC TACHOMETER



Illustrated above: "Vac-Tach" Model with 4 1/2" face dial and built-in vacuum gauge.



Standard Model: 3" face dial, Red economy range markers.



Recorder Model: Same as "Standard Model" except with engine revolution counter and totalizer (Odometer).

Standard And Recorder Models Made In Ranges: 0-2500; 0-4500; 0-8000 RPM.

- Finest Quality! Precision Built!
- Powered By New Electric Drive!
- Easier, Faster To Install!
- Large Size Illuminated Dial!
- For Cars And Trucks!

Here is the new, better, more dependable than ever Electric Tachometer from Stewart-Warner... designed, engineered, built to save you time, engine wear and money on every mile you drive!

Here with new, simplified Electric Drive—the positive action drive that eliminates extra batteries, complicated gear or relay controls. Assures greater accuracy. Highest efficiency.

Here with large-size face and full 270° pointer travel. A steady pointer with minimum over-run for accurate reading at any speed, any temperature.

Here and easier to install than ever. No tapping or drilling required. Takes only minutes. The new, improved Electric Tachometer by Stewart-Warner. Have you seen it... had it installed on your truck yet? You Should!

Available At Your Dealer Or Write:

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Instrument Division, Dept. CC-83
1840 Diversey Parkway, Chicago 14, Illinois

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August, 1953

having clutch trouble?



Specify VELVETOUCH MATCHED FACING SETS

Whether it's continual stop-and-go operation, overloading or driver abuse that's causing your clutch plate failures ... you'll find your answer in Velvetouch Matched Facing Sets. Because these sets are designed for EXTRA heavy duty use. They're built tough to give you extra miles of service ... extra clutch capacity ... extra savings!

You get double protection against adjustment and repair, for Velvetouch Matched Facing Sets give you FOUR controlled friction surfaces instead of two. In addition, Velvetouch enables you to reclaim heat-checked flywheels and pressure plates ... and put them back into service, better than ever!

Send for descriptive literature today. Either see your jobber, call our nearest branch, or write us direct.

Velvetouch

The S. K. Wellman Co.
200 Egbert Rd • Bedford, Ohio

THE S. K. WELLMAN CO. SALES OFFICES AND WAREHOUSES

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| * CHICAGO—1500 South West- ern Ave., Chicago 6, Illinois | * LOS ANGELES—1110 South Hope St., Los Angeles 13, Cal. | * TORONTO, ONTARIO—The S. K. Wellman Co. of Canada, Ltd., 2839 Dufferin St. |
| * CLEVELAND—200 Egbert Rd., Bedford, Ohio | * PHILADELPHIA—1545 West Belmont Ave., Philadelphia 41, Pa. | ** WASHINGTON—1101 Vermont Ave., N. W., Washington 5, D. C. |
| * DALLAS—3407 Main Street, Dallas 1, Texas | * PORTLAND—636 N. W. 16th Ave., Portland 9, Oregon | |

** EXPORT DEPARTMENT—8 South Michigan Ave., Chicago 3, Illinois

* SALES OFFICE AND WAREHOUSE ** SALES OFFICE



Grain and Produce Trailer

New all-aluminum grain and produce trailer of American Body and Trailer, Inc., Oklahoma City, Okla., is an open-top frameless trailer capable of carrying a uniformly distributed load of 50,000 lb. with an adequate factor of safety. The complete 32-ft unit weighs 7939 lb due to lightweight aluminum flooring extrusions, cross members, top and bottom side rails, and body sheet. All upright posts are extended below the top of the bottom side rail and then riveted through the side rail to the ends of cross members.

New Products

Continued from Page 144

tributed. Discs absorb and dissipate heat rapidly. Three assemblies are available, each bonding one, two, or three clutch plates at the same time: (1) 9 to 12 in. dia, (2) 12 to 16 in. dia, (3) 16 to 20 in. dia.

P46. Welding Compound

Thompson and Co., Oakmont, Pa., has announced development of an anti-spatter compound to increase speed and efficiency of welding operations by reducing necessary clean-up time. The compound is brushed, sprayed or wiped along the edges to be welded and over an area extending 6 to 8 in. from the weld. When the hot spatter from the welding operation strikes the compound it will not adhere to the metal and thus can be easily wiped off. There are two types: No-Clean (SO-327) which provides a firm foundation for paint and requires no removal before priming; and Pickle-Off (SO-317) for use where the job is to be pickled and for use on chromium or stainless steel.

P47. Tire Spreader

A new all-purpose tire spreader has been announced by Amber Duck Products Co., Beverly Hills, Cal. It handles all sizes of passenger car tires and truck tires up to and including 14-in. sizes.

P48. Air Compressor

A new 25 hp stationary air compressor for general applications is announced by Davey Compressor Co., Kent, Ohio. Known as Model No. 25D, the unit has a displacement of 128 cfm. It is direct connected to a 25 hp electric motor and is available with constant speed or start-and-stop pushbutton controls as desired.

END

Please Resume Reading Page 94

COMMERCIAL CAR JOURNAL, August, 1953



BENNETT FLEETMETER

Gasoline Pumps

- ACCURATE INVENTORY CONTROL
- ELIMINATION OF ERRORS
- FASTER REFUELING
- REDUCED MAINTENANCE COSTS
- SAVING IN MAN-HOURS*

offer these five* features—and more, because they are especially designed for rugged fleet fueling jobs . . . not a miniature but a full-sized gasoline pump engineered for the fleet operator.

Write for full details



JOHN WOOD COMPANY

Bennett Pump Division
MUSKEGON, MICHIGAN

Offices in Principal Cities

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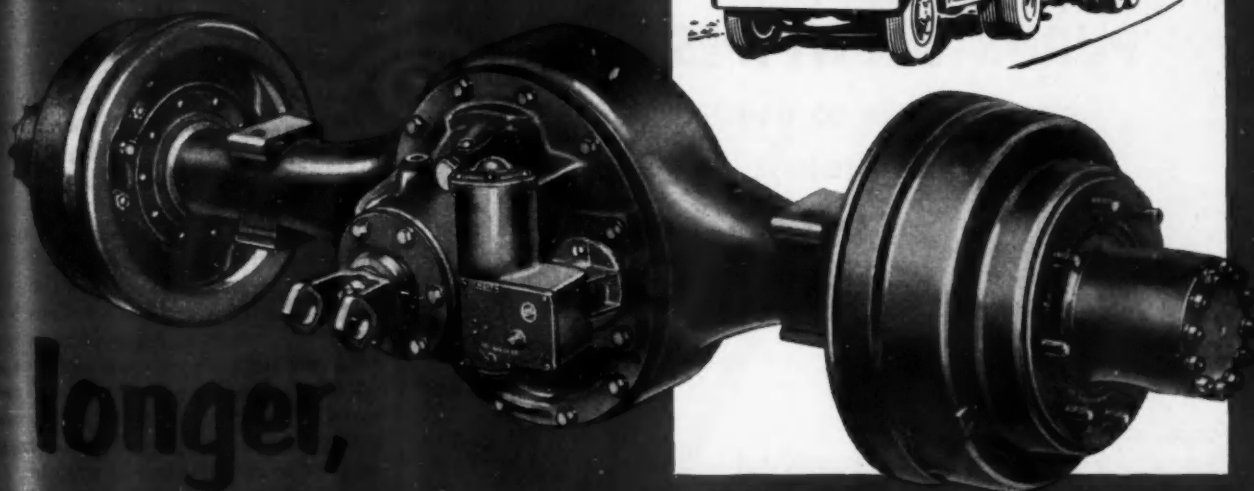
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August, 1953

The exclusive features in Eaton 2-Speed Axles keep trucks on the job



longer, at lower cost and make them worth more on the trade-in

More than a million-and-a-half
Eaton 2-Speeds in trucks today!
For complete information, see your truck dealer.

EATON

AXLE DIVISION

MANUFACTURING COMPANY

CLEVELAND, OHIO



PRODUCTS: Sodium Cooled, Poppet, and Free Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Rotor Pumps • Motor Truck Axles • Permanent Mold Gray Iron Castings • Heater Defroster Units • Snap Rings • Springtites • Spring Washers • Cold Drawn Steel • Stampings • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers

COMMERCIAL CAR JOURNAL, August, 1953

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LEGAL CORNER



Non-Union Driver Can Unload at Union Dock

MANY truck lines, particularly private fleets, are non-union or open shop. Until recently this meant trouble whenever loading or delivery was made at a closed shop dock. Now the Philadelphia Federal Court has ruled that,

under present labor law, union stevedores cannot force a non-union driver to hire union help to unload even though the platform is under a closed shop contract.

Facts of the case were:

A carrier in Pottstown, Pa., operates a non-union fleet. Last Fall one of its trucks was unloading at a Camden, N. J., plant when the union steward, strolled up and told the driver he wanted to see his union card and dues book. The driver said he didn't have one.

The plant steward told him that this was a union dock and he would have to hire a union helper to unload the truck.

The driver was nearly through unloading and didn't need the help anyway, and he said so. The union man told him it would cost a day's pay for a man, or ten dollars, to get the truck unloaded whether the man worked or not, and that if the driver was smart, he would pay.

The driver still refused, so the steward called three or four stevedores and they threatened to beat the driver up and did push some boxes over on him and let the air out of the front tires of his truck.

The truck company had been having a lot of this kind of trouble, so it reported the incident to the police who arrested the steward. He was tried and convicted of extortion and sentenced to two years in a Federal penitentiary. He appealed, but his conviction has been reaffirmed.

The Law

HE WAS convicted under a law passed in 1933 to stop the protection racket that was developed by unemployed gangsters after repeal. The law worked for that purpose but was never intended to apply to union activity. However, the judge said that whenever a union threatens or uses force to obtain money for "imposed, unwanted or superfluous services," it is violating the law.

It is legal to attempt to unionize a driver, to ask for work, even to picket or refuse to work in some cases. But it is not legal to threaten violence or damage property, or to forcibly refuse access to facilities. Union terminal employees cannot force unnecessary help upon non-union trucks using a union terminal.

Here's why
PUROX BLOWPIPES
Trade-Mark
cost so little to use
and maintain

- **SELF-SEATING VALVES**
Reseat-scored valves when turned tight.
- **RUGGED HANDLE ASSEMBLY**
Wear-resistant bronze front body—heavy-walled seamless tubes—pressure forged valve body; all built for long, trouble-free service.
- **SLIP-FIT "O" RINGS**
Eliminate critical metal-to-metal gas seals. Easy to replace.
- **MIXER IN EACH HEAD**
Delivers perfect gas mixture for easiest and best work. New design resists backfires, eliminates burnouts.
- **SWAGED, PURE COPPER TIPS**
Streamlined gas flow and exceptionally stable flames. Heads snap in and out of handle. No wrench needed.

The PUROX W-202 blowpipe (illustrated) is available with 13 standard welding heads and 3 multiflame heating heads, all of the snap-in type. Ask your LINDE jobber for a demonstration or write for further information. LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, New York. In Canada, DOMINION OXYGEN COMPANY, LIMITED, Toronto.

GET IT FROM YOUR LINDE JOBBER



The terms "Purox" and "Linde" are registered trade-marks of Union Carbide and Carbon Corporation.

ICC Leasing Regulations

Continued from Page 65

owner of the vehicle giving the origin and destination of the shipment of agricultural commodities or livestock and authorizing the driver to lease the vehicle for the return trip.

The lease, contract or other arrangement must provide that the carrier have exclusive possession, control and use of the equipment and that the authorized carrier is to assume responsibility for the equipment for the duration of the agreement. However, a provision may be made in the agreement for considering the lessee as the owner, for the purpose of subleasing to other authorized carriers under the regulations, during the term of the agreement.

Under these regulations, according to Director Blanning, a carrier must meet the same insurance requirements for leased equipment as for its own vehicles. The insurance filings required by the Commission cover all vehicles used by a carrier in performing its operations.

If the lessee is an authorized carrier of household goods the provision for the possession, control and use of the equipment applies to the period during which the equipment is operated by or for the authorized carrier.

Compensation to be paid by the lessee to the lessor must be specified in the written agreement. It may not be computed on the basis of any division or percentage of any applicable rate or rates on any commodity carried in the vehicle or on any division or percentage of the revenue earned by the vehicle during the period of the agreement.

Asked if this would permit arranging payment for leased equipment on a ton-miles basis, Mr. Blanning said:



"... and it has a built-in record player which will give anything on the road the sweetest argument you ever heard!"

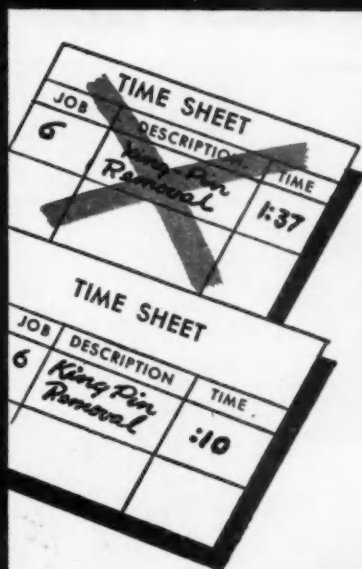
"It appears to have been the purpose of the Commission that compensation for the leased vehicle be based solely on the use of the vehicle and without any relation to the amount of revenue the vehicle produces for the lessee. It would seem that compensation deter-

mined on a ton-mile basis would not be proper where the commodity or group of commodities being transported are rated on a ton-mile basis."

The written agreement must also specify the time and date or circumstances on which it begins and the time or circumstances on which it ends. The period of the agreement must correspond to the time for giving of receipts for the equipment by the carrier when assuming possession and by the owner when the equipment is returned to his control.

(TURN TO PAGE 152, PLEASE)

NOW! PUSH KING-PINS IN MINUTES

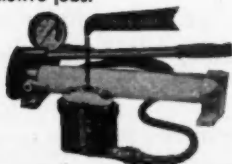


WITH THE

NEW OTC

HYDRAULIC KING-PIN PUSHER

Designed with the famous OTC CENTER-HOLE, the 17½ ton ram with its accessories will pull or install cylinder sleeves, shafts, bearings, gears, etc. Completely portable (only 10 lbs.), it does scores of automotive jobs.



From hours to minutes—for a king-pin job. With the OTC 17½ Ton Power-Twin and King-Pin Pusher, you remove car and truck king-pins 75% faster. No hammering and damaging parts—no torque to work against—you do the job 90% easier. Now this time consuming job can be done at a profit on a flat rate basis, and the tool is paid for in a few jobs. Ask your dealer for a demonstration.

Booklet describes complete line and uses of OTC Tools



OWATONNA TOOL COMPANY

341 CEDAR STREET • OWATONNA, MINNESOTA

ICC Leasing Regulations

Continued from Page 151

Three copies of the agreement must be made. One copy must be retained by the authorized carrier, one copy must be retained by the owner of the equipment, and one copy must be carried in the equipment during the entire period of the agreement.

In place of a copy of the actual lease, a written statement prepared by the authorized carrier or its employee or

agent may be carried in the vehicle. This must certify that the equipment is being operated by the authorized carrier and must specify the name of the owner of the equipment, the date of the agreement, the term of the agreement, any restrictions relative to the commodities to be transported, and the location of the premises where the original of the agreement is kept by the authorized carrier.

Receipts must be given to the owner by the carrier when assuming possession and to the carrier by the owner when the equipment is returned. Each

of these must specifically identify the equipment and must state the date and time of day at which possession is assumed.

Inspection of Equipment. Before taking possession of equipment under a contract, lease, or other arrangement, it is the duty of the carrier to ensure that the equipment complies with parts 193 and 196 of the Motor Carrier Safety Regulations (Rev.), pertaining to "Parts and Accessories Necessary For Safe Operation," and "Inspection and Maintenance." If explosives or other dangerous materials are to be transported on the equipment it must also meet the requirements of part 197 of the safety regulations pertaining to "Safe Transportation of Explosives."

To meet this regulation the vehicle must be inspected by a person "who is competent and qualified to make such inspection" and who has been authorized by the carrier to make the inspection as the carrier's representative.

Results of the inspection must be certified by the person making the inspection on a report in the form shown in the illustration on page 65. If the leased equipment is not a power unit, a form of report which applies to the non-power unit may be used.

It is also required that the carrier (or his co-partner in a co-partnership or one of the officials if the carrier is a corporation) must certify on the report that the person who made the inspection is competent and qualified and has been authorized by the carrier to make the inspection.

If the inspection shows that the equipment does not meet the specified requirements the carrier may not take possession of the equipment.

The report form must be retained and preserved by the carrier employing the equipment.

Identification of Equipment. Equipment used under these rules must be properly and correctly identified as being operated by the authorized carrier during the period of the agreement in accordance with the Commission's requirements in Ex Part No. MC-41; Part 166, Identification of Motor Carrier Vehicles.

If removable devices are used by the carrier to identify equipment operated under these rules the devices must be on durable material such as wood, plastic, or metal and must bear a serial number in the carrier's own series so that a proper record may be kept of each of the identification devices.

Any legend or device used to identify the equipment as being operated by the authorized carrier must be removed before the carrier relinquishes control of the equipment.

(TURN TO PAGE 154, PLEASE)

FROM EVERY ANGLE PYRENE IS YOUR BEST BUY



Pyrene Vaporizing Liquid Extinguishers are superior for vehicle fires because the stream is longer and because the liquid is nonconducting, nondamaging, nonfreezing, and has the smothering, cooling and penetrating actions required.

PYRENE UNITS WILL CUT YOUR PROTECTION COSTS



1½ qt. pump type
Heavy Vehicle Extinguisher

Because of their unusual resistance to shock and vibration, Pyrene* Heavy Vehicle Units last at least twice as long as other vaporizing liquid extinguishers. Since they're priced no higher than many other brands, this means they usually cut your costs in half. There's a right size and type of Pyrene Vaporizing Liquid Extinguisher to fit your needs: 1 qt. and 1½ qt. pump units, 2 qt. and 1 gal. pressure units.

*T.M. Reg. U.S. Pat. Off.

A complete line of extinguishers for vehicles, shops and garages.

PYRENE MANUFACTURING COMPANY
589 Belmont Avenue Newark 8, New Jersey

Affiliated with C-O-Two Fire Equipment Co.

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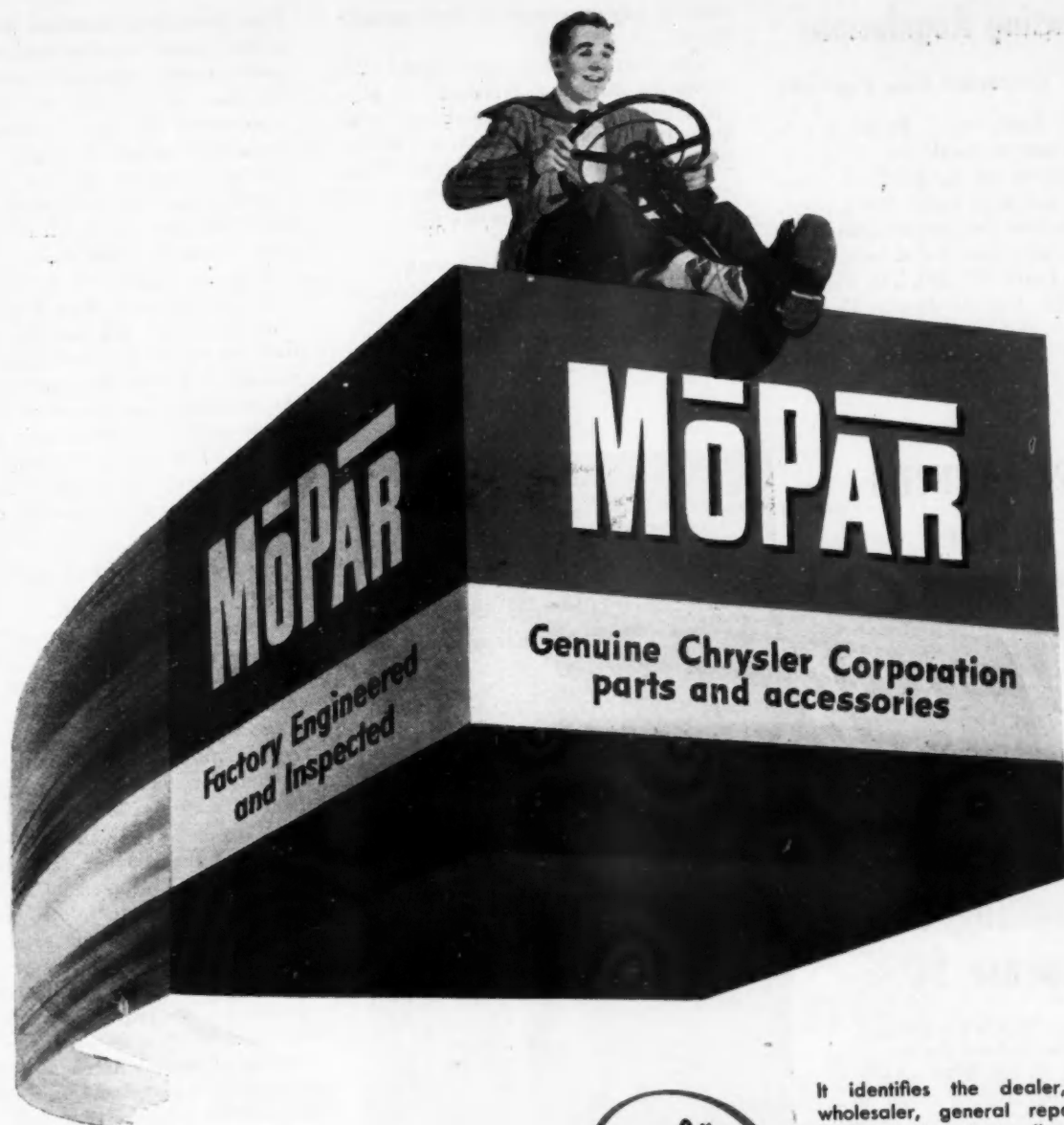
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ASE)

August, 1953



Assure performance that satisfies!

Be certain that the service work on your fleet always results in *thorough* satisfaction. Be sure by using only MoPar—*genuine Chrysler Corporation parts and accessories*.

They are made especially for Plymouth, Dodge, De Soto and Chrysler cars and Dodge "Job-Rated" trucks. Because they are right in *every* way, they save time and trouble—and they assure lasting satisfaction.

You'll find it pays all-round to use parts that fit right and work right—MoPar parts, engineered by Chrysler Corporation for top performance.

Look for
the MoPar
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It identifies the dealer, authorized wholesaler, general repair shop or service station that sells MoPar parts and accessories—engineered for the vehicles in your fleet built by Chrysler Corporation.

CHRYSLER CORPORATION • PARTS DIVISION • DETROIT 31, MICHIGAN

COMMERCIAL CAR JOURNAL, August, 1953

ICC Leasing Regulations

Continued from Page 152

Driver of Equipment. Before a person other than an employee of the authorized carrier is assigned to drive equipment operated under these rules, the carrier has the responsibility of making certain that the driver is familiar with Parts 192, 193, 195 and 196 of the Motor Carrier Safety Regulations (Rev.) and that his employment as a driver will not result in a viola-

tion of any provision in such regulations.

The carrier must also require the driver to furnish a certificate of physical examination in accordance with Part 191 of the Motor Carrier Safety Regulation, or a photostatic copy of the original certificate of examination, and must retain this form in his files.

Record of Use of Equipment. The carrier operating equipment which is not his own under these rules must prepare and keep a manifest covering each trip for which the equipment is used.

This must show the name and address of the owner of the equipment; the make, model, year, serial number and the State registration number of the equipment; the name and address of the driver; point of origin; time and date of departure; point of final destination; and the authorized carrier's serial number of any identification device affixed to the equipment.

Way bills, bills of lading, freight bills, manifests or other papers identifying the load and clearly indicating that the transportation of the property carried is under the responsibility of the authorized carrier must be carried in the equipment while it is being operated. These papers, along with the truck manifest described above must be preserved by the authorized carrier.

Interchange of Equipment

THESE rules refer only to the interchange of equipment between authorized common carriers. They permit interchange of equipment between carriers by contract, lease or other arrangement and permit one carrier to receive equipment from another carrier in connection with any through movement of traffic provided certain conditions are met. It should be noted that the regulations do not deal with compensation for equipment in interchange service, and that therefore such compensation may be based on a percentage or division of revenue obtained from the use of the equipment. The regulations do require, however, that the carriers' records show the charge for use of such equipment separately from the division of revenue accruing to the carriers from the transportation.

Following are the conditions outlined by the ICC with regard to interchange of equipment:

1. That the agreement for the interchange specifically describes the equipment to be interchanged, the specific points of interchange, the use to be made of the equipment and the compensation to be paid for such use. The agreement must be signed by the carriers or their authorized representatives.

2. That the operating certificates of the carriers participating in the interchange authorize the carriers to transport the commodities proposed to be carried in the through movement and to provide service from and to the point where the physical interchange occurs.

3. That each carrier assign its own driver to operate the equipment from and to the points of interchange and over the routes authorized, unless the carrier holds a certificate from the Commission which permits it to operate

(TURN TO PAGE 156, PLEASE)

the fleet owner's profit partner



cuts cleaning time and expense 90%

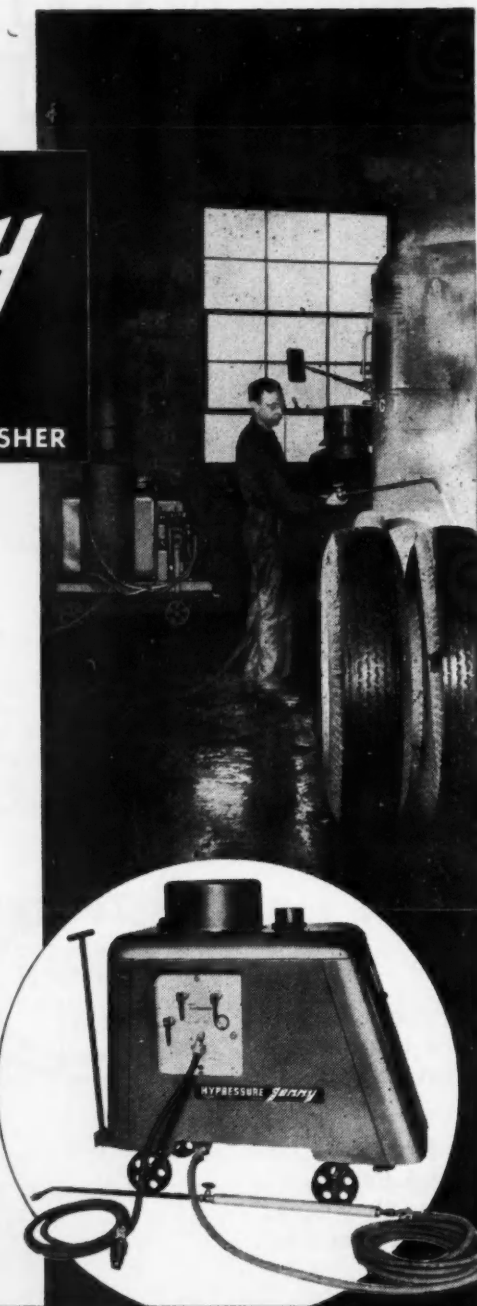
Hypressure JENNY cleans a truck or bus in *one-tenth* the time it takes to do it by hand. **YOU PROFIT** by saving 90% in time and labor expense.

Periodic, "down-to-the-bone" Hypressure JENNY steam cleaning keeps your equipment spick-and-span and shows up damage or wear before dangerous, time-consuming road failures occur. **YOU PROFIT** in road time saved—increased safety.

Thorough Hypressure JENNY steam cleaning before repair work is begun, permits your mechanics to complete jobs in 25% to 40% less time. **YOU PROFIT** through less "downtime", more "pay time." And last but not least **YOU PROFIT** through the two-in-one advantage of Hypressure JENNY'S built-in cooling system flusher that keeps radiators and engine blocks free of muck and scale, and engines operating efficiently and economically.



For complete information on how to put this marvelous profit partner to work in your shop, write for your **FREE COPY** of "1001 WAYS TO EXTRA PROFITS WITH HYPRESSURE JENNY." You'll be glad you did.



HOMESTEAD VALVE MANUFACTURING COMPANY

P. O. BOX 90

"Serving Since 1892"

CORAOPOLIS, PA.

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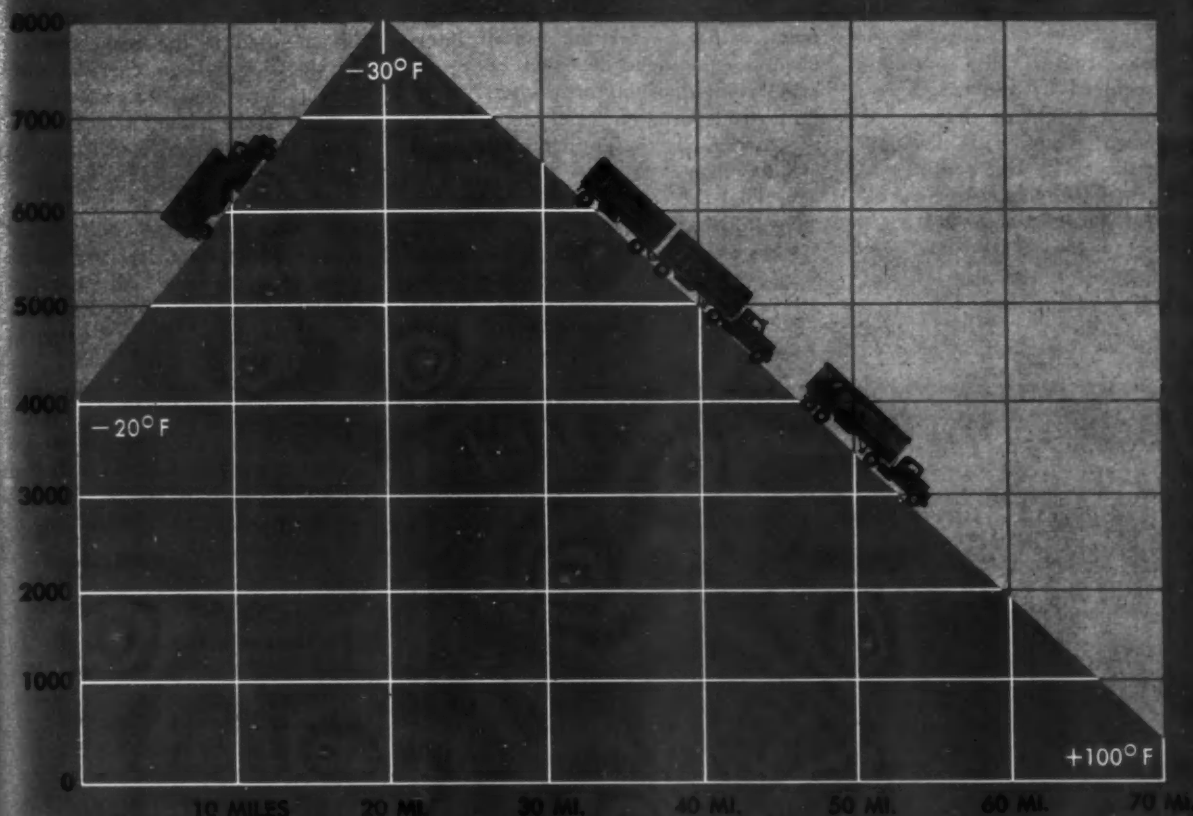
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gust, 1953

FEET ABOVE
SEA LEVEL



Clevite* 77 Bearings where the going is really tough

"CLEVITE 77 Bearings are used in all possible applications on our fleet of 120 vehicles for one reason only—they give better service for our severe conditions," reports the Service Manager of an important truck line in the Pacific Mountain area.

"For example, our heavily loaded trucks often leave here, elevation 4,000 feet in 20° below zero weather, climb over the mountain pass, elevation 8,000 feet, tem-

perature -30° below zero and then coast down to the valley, elevation 200 feet where the temperature is 100° or more. The rapid climb and frequent shifting up and down, to say nothing of temperature changes make this really tough going."

You can depend on the original equipment design, construction and precision of these bearings. Distributed under our Monmouth* trade mark by NAPA Jobbers coast to coast. Ask for them by name.

Your NAPA Jobber is a Good Man to Know!



*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation.

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ENGINE BEARINGS
CLUTCH PLATES AND PARTS
CHASSIS PARTS



Supplied through Clevite Service, Inc. Made by The Cleveland Graphite Bronze Co.
Units of Clevite Corporation, Cleveland, Ohio.

COMMERCIAL CAR JOURNAL, August, 1953

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ICC Leasing Regulations

Continued from Page 154

over irregular routes with special equipment required by the cargo because of its size, weight or shape. In the case of such exception, a through movement of the cargo and equipment may proceed without change of drivers at the point of interchange.

4. That the traffic transported in such interchange service moves on through bills of lading issued by the

originating carrier and that the rates charged and revenues collected are accounted for in the same manner as if there had been no interchange of equipment. Charges for the use of interchange equipment must be kept separate from divisions or proportions of joint transportation rates accruing to the carriers by the application of local or proportional rates.

5. That the carrier acquiring the use of equipment in interchange assumes the responsibility to inspect the equipment or to have it inspected by a qualified, authorized representative in the

manner described in the section on inspection of augmented equipment (Page 152). Equipment which does not meet the safety requirements shall not be operated in the respective services of the interchange carriers until the defects have been corrected.

6. That the carrier's operating equipment in interchange service shall ensure that each vehicle so operated carries with it a copy of the interchange agreement, and that each power unit operated in interchange service is identified in accordance with the Commission's requirements in Ex Part No. MC-41, part 166, Identification of Motor Carrier Vehicles.

7. That a lessee of equipment on a through movement involving more than two carriers shall be considered as the owner of the equipment for the purpose of leasing the equipment for movement to destination or for return to the originating carrier.

Rental of Equipment

THE regulations specifically forbid:

1. Authorized carriers to rent equipment with drivers to noncarriers unless such service is specified in their operating authorities.

2. Authorized common carriers to rent equipment without drivers to noncarriers.

The effect of these two provisions is that a contract carrier may lease equipment without drivers to a noncarrier but may not lease equipment with drivers to a noncarrier. As the purpose of the rule is to prohibit the possibility of discrimination or rebating by common carriers and there is no prohibition of discrimination in the statute as to contract carriers, the different treatment of the two classes results from the difference in the statute.

A noncarrier is defined by the ICC as "a person other than an authorized carrier." Director Blanning pointed out that this definition includes as noncarriers those carriers licensed by a state to engage in intrastate transportation but not authorized as a common or contract carrier of property under the Interstate Commerce Act.

Questions Answered

The following are questions which carriers have already asked of the ICC with regard to the leasing regulations. The answers shown here are the substance of opinions made by W. Y. Blanning, Director of the Bureau of Motor Carriers.

Q. A noncarrier firm leases trailers from a noncarrier which are titled and registered in the name of the lessor. May such firm lease the trailers to an authorized carrier?

(TURN TO PAGE 158, PLEASE)

to get LONGER CONTACT LIFE!
... USE **ECHLIN**
CAPACITY RATED CONDENSERS



- 1 PERMANENT UNIVERSAL BRACKET
- 2 HIGH PRESSURE CONNECTIONS
- 3 CAPACITY STAMPED ON END
- 4 NON-INDUCTIVE WINDING
- 5 NEOPRENE INSULATION
- 6 HEAVY BAKELITE WASHER
- 7 HEAVY DUTY CASE
- 8 PRESSURE SEAL

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| PLUS TUNGSTEN | ON PLUS CONTACT | REQUIRES PLUS CAPACITY |
| PLUS TUNGSTEN | ON MINUS CONTACT | REQUIRES MINUS CAPACITY |

First, install Echlin HD-25 Condenser (.25 mfd.) for 5,000 miles. If there is no pronounced build-up on either contact, capacity is just right for conditions under which vehicle is operated. If build-up is on positive contact, use higher capacity Echlin Condenser, HD-30 (.30 mfd.). If build-up forms on negative contact, use lower capacity Echlin Condenser HD-20 (.20 mfd.).

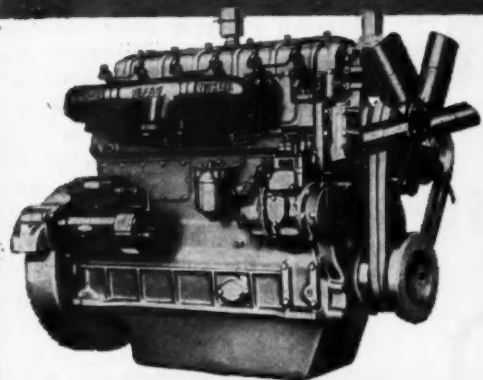
ECHLIN Ignition
A PRODUCT OF
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CONTACTS
COILS - CONDENSERS
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ECHLIN MANUFACTURING COMPANY • 234 EAST ST., NEW HAVEN 5, CONN.

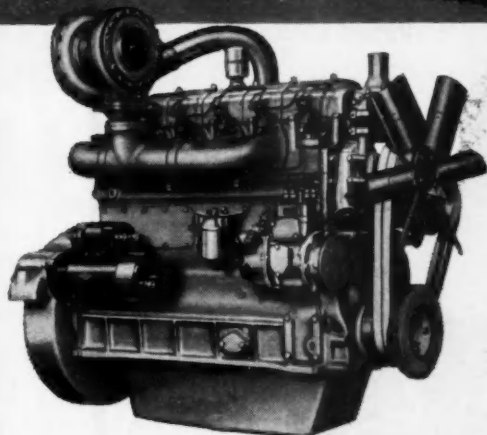
WAUKESHA

PAYLOAD POWER PLANT

Diesel - 135 Series - Gasoline

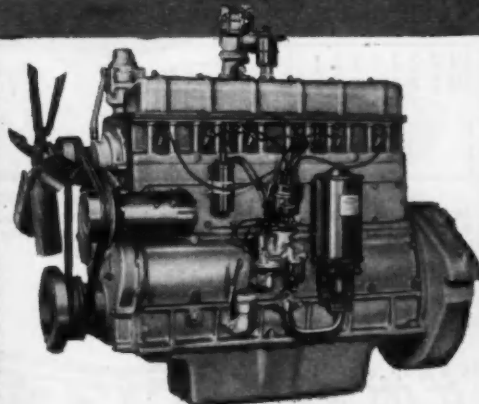


135-DKB—NORMAL DIESEL
426 cu. in. Max. hp 147 @ 2800 rpm.



135-DKBS—TURBOCHARGED DIESEL
426 cu. in. Max. hp 185 @ 2800 rpm.

SEND FOR BULLETINS



135-GKB and 135-GZE—GASOLINE
426 and 451 cu. in. Max. hp 147 and 153 @ 2800 rpm.

214

WAUKESHA MOTOR COMPANY, WAUKESHA, WIS. • NEW YORK • TULSA • LOS ANGELES

COMMERCIAL CAR JOURNAL, August, 1953

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ICC Leasing Regulations

Continued from Page 156

A. No. The regulations provide that contracts or agreements under which carriers arrange for the use of equipment which they do not own "shall be made between the authorized carrier and the owner of the equipment." Since the equipment is titled and registered in the name of the lessor, the lessee does not qualify as the "owner" of the equipment.

Q. May vehicles under lease to an authorized contract carrier be further leased to other carriers by the owner, or subleased to other such carriers by the lessee?

A. In general the regulations provide that the lessee have exclusive possession, use and control of the equipment for the duration of the agreement. Therefore for the period of the arrangement the owner-operator obviously could not lease the vehicle to others. It is my opinion that an authorized carrier may use leased equipment in the same manner as its owned equipment

and that under the conditions set forth in the exemptions such equipment may be leased to other authorized carriers without regard to the minimum period.

Q. May a shipper lease a vehicle by the trip, by the mile, or by the load for less than 30 days?

A. Leasing regulations do not apply to shippers, except for the prohibition against leasing of vehicles by a carrier to shippers. There is no prohibition against a shipper using leased vehicles for transporting its property providing that the shipper actually does the transporting. Transportation by a truck owner under pretense of a lease to a shipper would be unlawful. Usually, lease of a truck and driver would be considered a subterfuge, as it would normally prevent the shipper from exercising the control which would be required to establish that the shipper is performing the transportation.

Q. What effect do the regulations have on the lease of equipment by one noncarrier to another noncarrier?

A. The question of whether such a lease is proper depends upon whether it results in for-hire carriage. The Commission has held that operating authority from this Commission is not required to engage in the renting of vehicles without drivers to shippers. Where a motor vehicle is furnished to a shipper and a driver supplied with the vehicle, the owner may be transporting for compensation and if he does not possess appropriate operating authority, he is operating in violation of the Act.

Q. A noncarrier owner leases four tractor-trailer combinations to a common carrier, all being driven by men furnished by the owner. May a single sum be shown in the contract for lease of the four vehicles?

A. Yes. If all the equipment is received by the carrier at the same time, one contract showing a single sum may be executed. A copy of such a contract must be carried in each of the vehicles during the period of the agreement unless a substitute statement is carried as provided for in the regulations.

END

Please Resume Reading Page 66

Safety Sign

Motor Cargo, Inc., has placed signs on the rear of the company outfits which read:

"How Am I Driving? Address Comments to Motor Cargo, Inc., Akron 4, Ohio."



YANKEE No. 1501
Spare Bulb and Fuse Kit

Complies with ICC Reg. 193.95 (b) and (c) concerning on-vehicle storage of replacement bulbs and fuses.



CAPACITY
Holds 8 fuses, sixteen bulbs, one sealed beam unit.



DIMENSIONS
Only 5 3/4" high by 7 1/2" diameter. Easy to store.



SHOCK-PROOF
Sponge rubber holds bulbs firmly, cuts breakage.



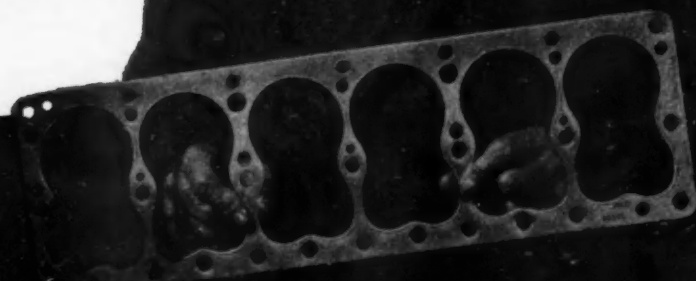
2-BOLT MOUNTING
Facilitates bulb check, quick access in emergency.

If it's a **YANKEE** IT LASTS

Write for catalog today

YANKEE METAL PRODUCTS CORP., Norwalk, Conn.

**You can be
completely
confident..**



FITZGERALD

Metallic Aluminum-
Fused-Oxide
Steel Asbestos

GASKETS

says P. J. Fitzgerald

New no longer, but *performance-proven*, Fitzgerald Metallic Aluminum-Fused-Oxide Steel Asbestos Gaskets have won world-wide acceptance for their ability to withstand the extreme pressures and heat of modern high compression engines under all sorts of conditions for several years now.

They're readily available everywhere . . . from leading jobbers throughout the United States and Canada and are exported to the rest of the world exclusively by the nation's largest automobile manufacturer.

When you install Fitzgeralds . . . as replacements or as original equipment . . . you can be sure of a lasting, perfect seal.

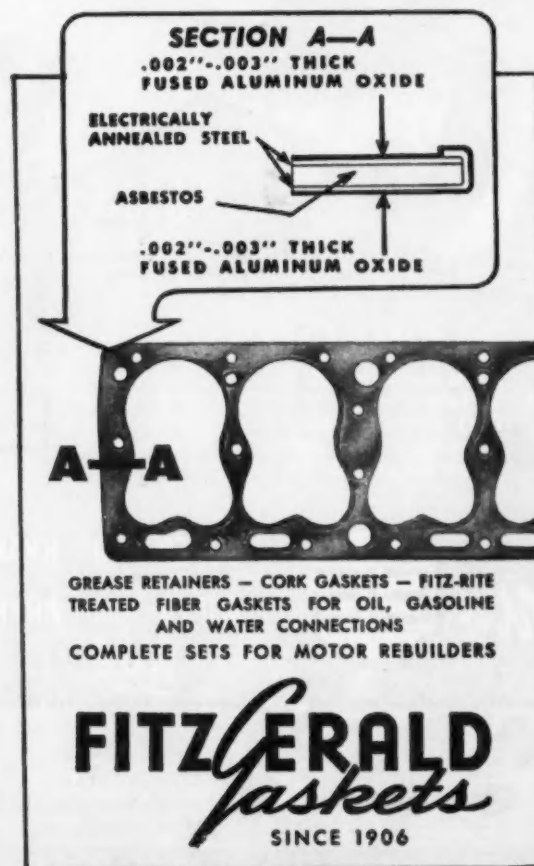
President

THE FITZGERALD MANUFACTURING COMPANY
Torrington, Connecticut

CANADIAN FITZGERALD, LTD.
TORONTO, CANADA

BRANCH AND WAREHOUSE
LOS ANGELES, CALIFORNIA

CHICAGO, ILLINOIS



Salute to Truckers

Continued from Page 83

livery units to huge construction and road building equipment.

Leading the parade was a colorful float sponsored by the Teamsters Joint Council, shown in the accompanying illustration. Also taking an active part in the parade were local business leaders and safety officials.

Advertising

RADIO and newspaper advertising were used extensively in the promotion. A double-page advertisement on the day prior to the opening of the promotion carried bargain merchandise offered by the stores with the mes-

sage that the money savings represented were made possible through the use of truck transportation. It went on to tell the complete story of the exhibits, demonstrations, displays and events scheduled for the six days of the promotion, stressing the cooperation of the trucking industry.

Two days later, a single page advertisement completely devoted to the trucking industry's participation gave the details of the truck rodeo and invited the public to see the displays. Another ad, saluting the merchants, was placed by the truckers.

More than 35 one-minute spot announcements were used on all of the city's radio stations. The following is typical of the announcements used:

ANNOUNCER: It's here—Western New York's greatest bargain event . . . THRUWAY PLAZA'S "Salute to Truckers." Teaming up with the great resources of America's vital trucking industry, THRUWAY PLAZA merchants scoured the nation's markets to bring you the bargain buys of a lifetime. The largest trucking firms of the country have cooperated to rush this bargain cargo to Buffalo. And along with these truly spectacular bargains, comes the most thrilling, the most dramatic array of exhibits and displays ever assembled for a sales event of this kind. Virtually every THRUWAY PLAZA store has an interesting, educational exhibit for everyone to enjoy. Don't miss this great sales event. See how your THRUWAY PLAZA merchants . . . using America's most modern . . . dependable, economical mode of transportation, save you money on every home and family need. Whether its food or fashions, housewares or home furnishings, you'll find it costs you less at THRUWAY PLAZA during this great "Salute to Truckers" sale now in full swing. Come early, stay late . . . THRUWAY PLAZA'S open till 9 P.M. tonight and every night!

Rodeo Draws Crowds

MORE than 10,000 people were drawn to the shopping center to watch Niagara Frontier's first truck rodeo. The contest was restricted to drivers for local firms with safety records of no accidents for at least a year. More than 50 contestants were entered.

In addition to the standard obstacle course field test, drivers were required to take the American Trucking Associations' comprehensive written test.

END

Please Resume Reading Page 84

**GOOD parts..
BAD fluid..
DON'T MIX!**



These pistons with heavy deposits on them, were removed from new cylinders in less than a very short time. A few extra pennies per job would have prevented this!

Don't let good parts and good work be ruined by bad fluid! Only Brake Fluids formulated by a reputable manufacturer of Brake Parts carries one and the same responsibility—CONTROLLED TOP QUALITY! Don't compromise with "below standard" fluids! If you take pride in your work and your reputation, specify and use EIS—It's worth the extra pennies.

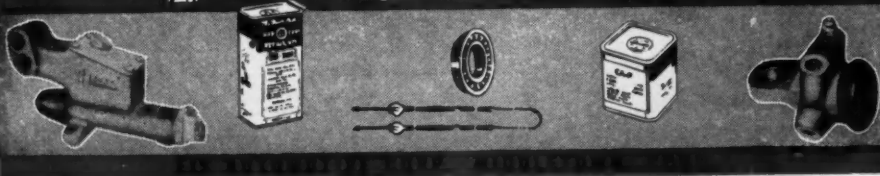


SUPER "40" BRAKE FLUIDS

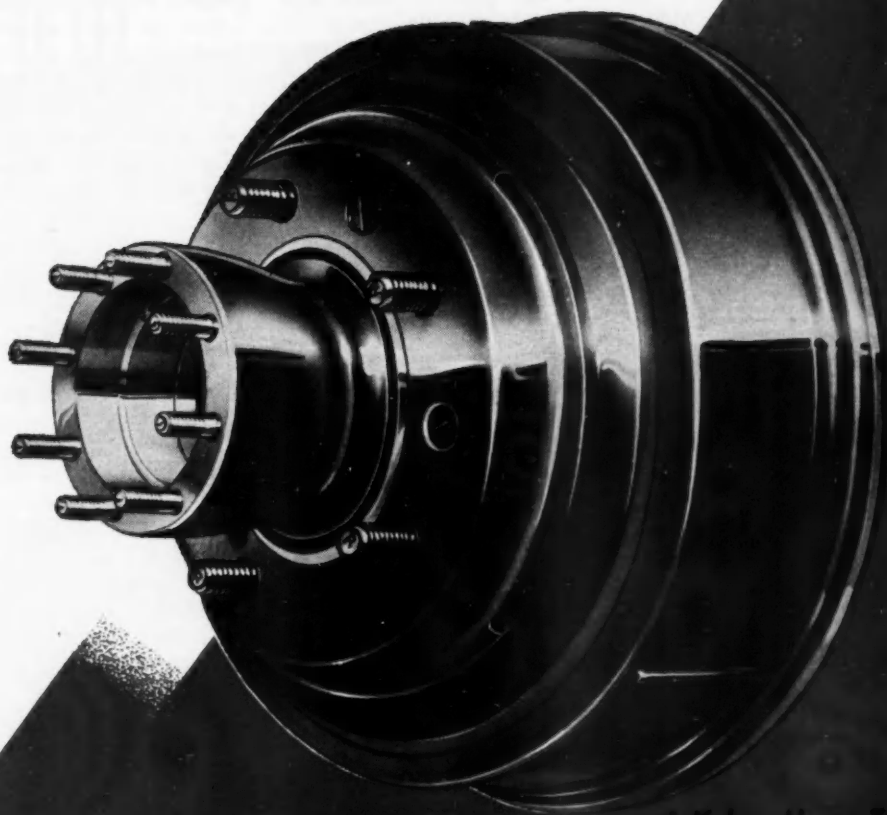
SUPER "50" BRAKE FLUIDS

Both

MEET ALL SAE SPECIFICATIONS



KELSEY-HAYES



A Kelsey-Hayes Truck Hub and Brake Drum Assembly

MAKERS OF QUALITY PARTS FOR THE AUTOMOTIVE INDUSTRY FOR FORTY-FIVE YEARS



Wheels, Brakes, Hubs and Drums . . . also Parts for Farm Implements and Aircraft

KELSEY-HAYES WHEEL COMPANY

DETROIT 32, MICHIGAN

PLANTS IN DETROIT AND JACKSON, MICHIGAN; McKEESPORT, PA.;
LOS ANGELES, CALIF.; DAVENPORT, IOWA; WINDSOR, ONTARIO, CANADA



Cool Shop in the Sun

Continued from Page 67

along the east and west sides of the building. Each door has a clear width of 22 ft and overhead clearance of 14 ft separated only by 2 ft wide columns. By opening all the doors maximum air and light may be obtained and greater use of floor space is achieved with drive-through traffic.

Immediately adjacent to the build-

ing, along its east and west sides, are two 16 ft wide continuous concrete aprons. When the doors are opened, the building floor plus the aprons provide a 99 ft wide operating space the entire length of the building, obstructed only by the two rows of door columns.

The expanded facilities include three additional grease pits and one dyna-

mometer pit. Each pit is 35 ft long, 2 ft, 9 in. wide, and 4½ ft deep. The pits are drained of waste water by means of an explosion proof sump pump, and through a gas and oil interceptor before discharging into a storm sewer. Each pit also has recessed oil drainage which permits direct waste oil drainage to a 550 gal storage drum buried outside the building. Explosion proof pit lights are installed in the pit walls below the floor line to provide a maximum light level of 65 foot candles, and on an average of 35 foot candles at the working surface under a vehicle. These facilities practically eliminate the need for drop cord lighting in the pits.

The grease pits are also provided with service hose recesses accommodating one air line, two grease lines, two oil lines, one standby high pressure line, and an electrical outlet.

Testing Equipment

THE most modern dynamometric testing equipment and lubricating apparatus have been installed in these pits to rank them among the most efficient and complete installations in the country, and they have received national recognition.

All air, grease and oil lines are underground and are of extra strong wrought steel pipe, with forged steel accessories. All are served from a single manifold by a 10 hp compressor. Two of the grease pits also have cross-bar recesses, which will accommodate a 20-ton uplift for the purpose of pulling frames and setting front ends.

Artificial illumination facilities for the garage building consist of fluorescent fixtures mounted under the beams between the bays and at the north and south walls.

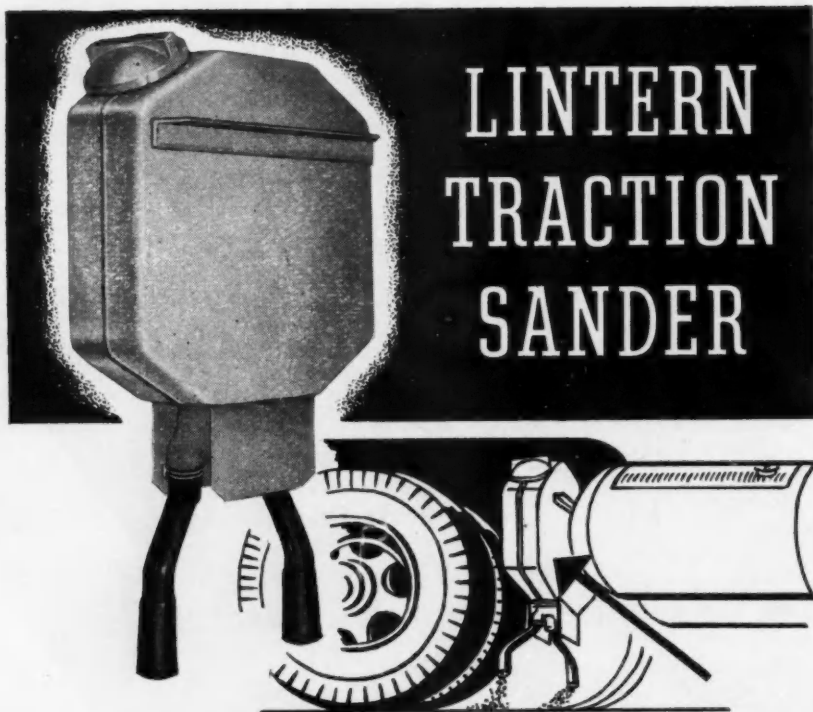
Surrounding the entire garage area is a new asphalt pavement with storm drainage facilities. This large area permits ample maneuvering, parking and traffic without confusion or congestion, and is fenced, and floodlighted at night.

A new modern filling station has been built adjacent to the garage, with two independent pumps and six buried gasoline tanks totaling 24,000 gallons capacity. There are also two buried 1000 gallon lubricating oil tanks, which pneumatically pump oil directly into vehicles through metered nozzles. Another fuel oil tank and pump serves all the rolling diesel equipment.

The improvement also includes a 40 by 49 ft concrete block stuccoed structure attached to the northeasterly corner of the garage. This is used for storing spare parts, paints, tools and supplies. The paint storage portion has explosive-proof incandescent illumination.

(TURN TO PAGE 164, PLEASE)

Announcing the Improved



LINTERN TRACTION SANDER

By painstaking redesign we have reduced the weight of Lintern Air Operated Traction Sanders without sacrificing any of their distinctive features. This reduction, plus a new lighter weight traction material now available, assures truckers a combination of maximum protection with minimum GVW.

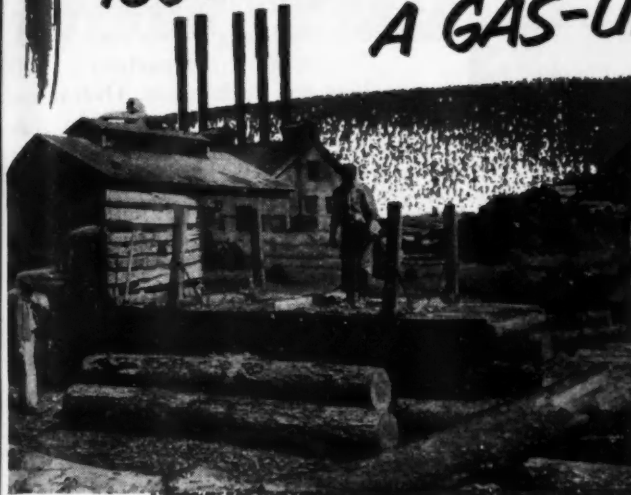
Another important improvement is the use of splash guards to shield the actuating mechanism—thereby making doubly sure these sanders will respond instantly.

Among other features, greatly appreciated by operators, are the patented, weatherproof nozzles and the "DEMOIST" absorbers attached to the tightly sealing fill caps. Hand control valve or foot control operation, as you wish. Air operated for utmost dependability, "as dependable as your brakes".

Probably no investment you can make will offer you such great protection at so little cost — and insure over-the-road safety in slippery, icy weather. Ask for new Bulletin 5307.

THE LINTERN CORPORATION
ROUTE 20, EAST • PAINESVILLE, OHIO

**HAULS 15 TONS... COVERS
136 MILES DAILY... WITHOUT
A GAS-UP STOP!**



*Oscar
Riendeau*

**NEW HAMPSHIRE LOGGER, GETS GREAT
TRUCK AND BULLDOZER PERFORMANCE WITH
COMPLETE LINE OF CITIES SERVICE PRODUCTS.**

Riendeau says, "Since switching to Cities Service Gasolene and Oil, I can make two round trips to the lumber mill, some 136 miles, without a gas stop. We couldn't do that before."



*"My 9.00-20 Pacemaster
Deep Skid Tires are given the
roughest treatment on our bull-
dozer roads. They're able to take
a beating with the best of them
... get me in and out of spots
we couldn't work in before."*

CITIES



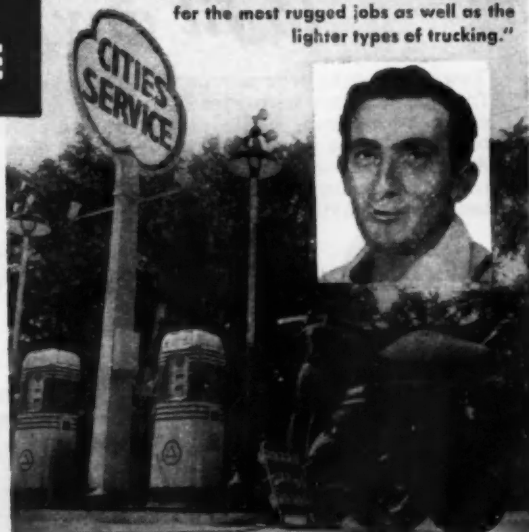
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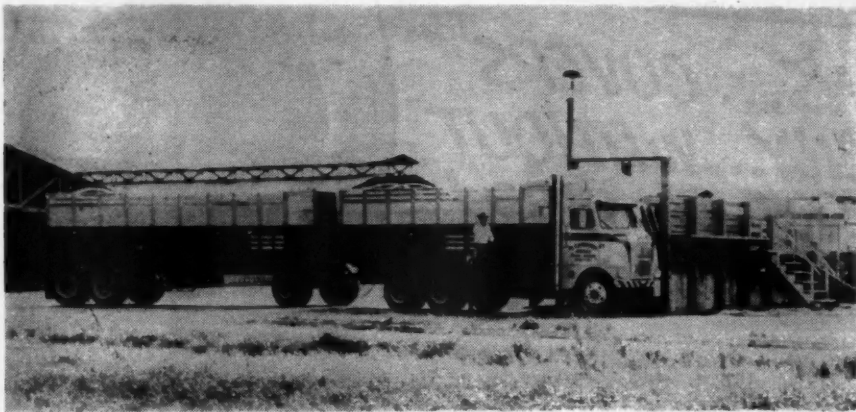
"My Truck runs as many as 18 hours a day over the toughest kind of going. I've found that Cities Service Triple HD Koolmotor Oil gives top performance under the tough conditions found in my operation."



"I cut my own truck roads through the forest with an International TD-14 Diesel. My 'dozer' is always on the job thanks to top performance with Cities Service Diesel Fuel Oil and Lubricants."

"On the basis of the success I've had with them, I recommend Cities Service Products for the most rugged jobs as well as the lighter types of trucking."





White Freightliner

Continued from Page 85

place behind the seat, to give 23 ft of loading space on the truck with a total of 51 ft with full trailer within a 60 ft overall length as shown at left.

The sleeping compartment is 82 in. long and 28 in. wide. Overall size of the cab is 70 in. deep, 86 in. wide and 11 ft 5½ in. high from ground to the top of the cab. The front axle is 28 in. from the front bumper.

Three of the double-deck sleeper truck and trailer combinations now in use weigh 32,060 lb each, including spare tire and 75 gal of fuel. The payload is more than 43,000 lb with 240 gal of fuel.

The WF-64 chassis has a 205½-in. wheelbase, Cummins NHB engine, Spicer 8051 main transmission, 8031-G auxiliary transmission,

END

Please Resume Reading Page 86

TRY THESE FOR SIZE



There's a MIRO-FLEX mirror to fit any truck

You can be sure your mirror fits your trucks if you make your selection from the famous Miro-Flex line of automotive mirrors. Over 300 different combinations, using standard interchangeable heads, arms and brackets, make it convenient for you to pick out the mirror you need. All Miro-Flex mirrors are made of the finest materials available and have the exclusive Tension-Grip on all extendable housings. Mirror heads are heavily silvered to assure longest life.

Made by the Originators of the Famous Miro-Flares
Write for New Catalog and Prices



Cool Shop in the Sun

Continued from Page 162

tion. All rooms contain modern type built-in shelves, cabinets and lockers.

Electrical System

THE electrical installation provides additional facilities for general lighting, 230 volt service for various types of power equipment, 115 volts for general service outlets, a public address system, flood lights, telephone circuits and ventilation fans. All receptacles are three pole safety type to insure adequate grounding of all power equipment.

We are continuing to use the old garage building with its office, wash-rooms, blacksmith shop, machine shop, tire changing area and stockroom, for servicing the special equipment. A 70 ft by 37 ft space between the old and new garages was roofed with the same type used on the storage rooms, namely; pre-cast concrete joists with pre-cast zonalite roof slabs. This space now serves as an addition to the existing welding shop.

The contract cost for the building, including concrete aprons, welding shop, service station and certain equipment was \$157,728.40. Actual cost was \$8.40 per sq ft of interior floor area, and approximately \$0.39 per cu ft.

END

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Page 85

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age 68

ust, 1953

Now-you can superpower any tired truck

— with a GMC Replacement Super-Engine

YOU do a lot more than renew your truck power when you install a GMC Replacement Engine. *You superpower a hauler — of any make or model — with the punch of the most spectacular new GMC engines for 1953!*

You choose from an unrivaled 105 to 225 h.p. lineup. One power plant is the highest-compression gasoline truck engine ever used. Another is — pound for pound — the mightiest in all trucking history. And GMC lightweight 2-cycle Diesel engines are more efficient and economical — because they deliver power on *every* piston downstroke.

But matchless “new-truck” power is only part of the pay-off:

You wipe out the cost of reboring, new pistons and other expensive engine-rebuilding operations. Your trucks are out of the shop and back on the road *days* sooner. And you get thousands of *extra* top-profit miles out of every truck in your fleet.

GMC Replacement Engines are quickly and easily available. Your GMC dealer can rush you *any* model you need—when you need it. Down go shop costs—profits resume sooner—truck-life is extended. Think it over!



— superpowers any truck!

GMC Truck & Coach Division of General Motors

...Causes and Cures of Valve Seat Distortion

Continued from Page 71

the poor performance of an engine which otherwise has been rebuilt with the utmost care.

Scale and dirt in cylinder head and cylinder block cooling passages cause hot spots to occur. This is particularly true in the area surrounding the ex-

haust valve seats. The scale build-up has an insulating effect preventing the transfer of heat adequately and uniformly from the valve seat insert thereby leaving a distorted seat. These deposits frequently obstruct cooling passages to the point where the coolant

flow is stopped and the valve seats reach abnormally high temperatures creating a very bad condition of distortion.

If inspection of the cylinder head or block after cleaning with the commercially available cleaners still shows the presence of scale in the critical areas, the parts should be scrapped as re-usage will not give satisfactory valve life. Overcooling in cool weather can be just as serious as undercooling and for this reason thermostats must be in good working order.

The improper installation of inserts is conducive to distortion due to localized overheating. Insert counterbores must be clean, smooth and square with the center line of the guide. Chilling the insert in a mixture of dry ice and kerosene is the best installation method. Driving the insert into the counterbore frequently traps foreign material underneath the insert resulting in poor transfer of heat from the insert to water jacket. Distortion is unavoidably the end result.

In analyzing many of the failures of replacement inserts that have come loose, we have found that there is a tendency for the repairman to exceed the interference fit recommended by the engine manufacturer. The excessive interference fit causes either collapse of the insert or enlargement of the counterbore, with looseness as the end result.

If the repairman, in measuring either the insert or the cavity, finds either contraction or enlargement of the respective parts, it is an indication that excessive interference fit had been used; and further increase in the amount of press fit will only aggravate this condition of looseness.

Rotation minimizes the effect of valve seat distortion and helps to increase valve life in existing engines. Many engine manufacturers specify rotation as standard equipment. In addition, many rotators for additional applications are provided through service outlets. Wherever they are available their use is recommended for increasing valve life.

Much distortion can be introduced by unequal tightening of cylinder head bolts. This applies to both L-head and valve-in-head engine designs. The recommended bolt tightening sequence and bolt torques are to be observed under all conditions. Cylinder head gaskets in current use take an initial set when first run in an engine. For best results, cylinder heads should be torqued in three steps: (1) At installation, (2) After engine has been brought to operating temperature and (3) After 500-1000 miles of operation. Retorquing the head also changes the valve lash.

(TURN TO PAGE 170, PLEASE)



What Causes These Brake Problems?

BRAKES — too little, too late
RELINING — too frequent
DRUM REPLACEMENT — too often
BRAKE ADJUSTMENTS — too regular

The Answer Usually Is TOO LITTLE BRAKING CAPACITY!

No doubt your vehicle has been provided with adequate brakes, but you can lose 25% or more of their braking power through improperly designed brake drums!



This is why Reyco engineering is important to you, because Reyco engineers know how and where to build in the extra strength which provides full braking area contact, good brakes, and low maintenance cost!

No Brake Can Be Better Than the Brake Drum that Backs it up

REYCO
REYNOLDS MANUFACTURING CO.
SPRINGFIELD, MISSOURI

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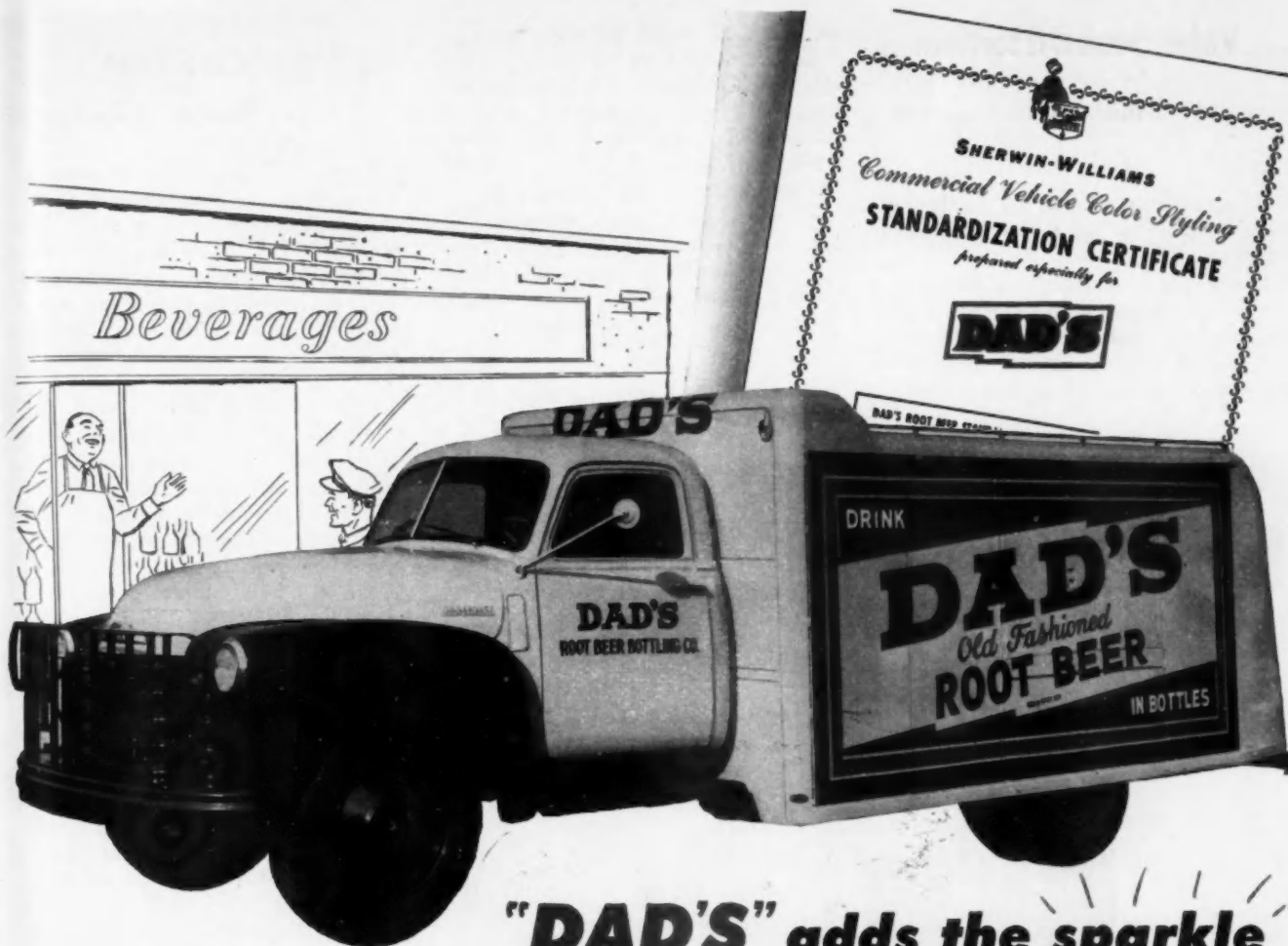
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ust, 1953



**"DAD'S" adds the sparkle
that helps build sales...cut costs**



APPROVED for leading NATIONAL FLEETS

Sherwin-Williams KEM Transport Enamels are approved and recommended finishes for the fleet equipment of Dad's Root Beer bottlers—one of many large national fleet operators that have adopted Sherwin-Williams Automotive Finishes!



Bottlers of Dad's Root Beer, like many other companies, depend on their trucks to stimulate selling. The trucks are virtually traveling bulletins. Product quality and cleanliness are reflected by the gleaming white finish accented by striking colors.

To keep their fleets looking their best, Dad's Root Beer Co. approves and recommends KEM® Transport Enamels as standard finishes. These improved finishes stand up longer . . . require less frequent lay-ups for refinishing . . . save finishing time in the paint shop.

KEM Transport Enamels represent the finest type of synthetic formulations. They are specially designed to resist the effects of heat, cold, moisture, grease, gasoline and rough handling . . . to dry fast even under abnormal extremes of temperature and humidity.

Get the facts about these timesaving, longer lasting finishes. Call your Sherwin-Williams "OK" Automotive Jobber, or write for name of nearest distributor. The Sherwin-Williams Co., Automotive Division, Cleveland 1, Ohio. (Export Sales Division, Newark, New Jersey.)

SHERWIN-WILLIAMS
AUTOMOTIVE FINISHES

... Valve Seat Distortion

Continued from Page 168

and adjustments should be made as required if the cylinder head bolts are retorqued.

In fitting a new valve to an engine it is important to check both the width of the valve seat and the amount of valve seat run-out with the valve stem. Valve seat run-out should be held to a maxi-

mum of .002. A seat width of 1/16 to 3/32, allowing 1/64 overhang of the valve outside diameter, is generally accepted as good practice for exhaust valves. The exception to this is on intake valves, which may frequently run less than 1/16 for seating width.

An interference angle of 1 to 1½ deg. is also accepted good practice. With rotation the interference angle is omitted, and the seating surfaces should be .090 to .100 wherever possible.

END

Please Resume Reading Page 72



Pictured here is one man and a BRADEN WINCH doing an efficient job of pole setting. The controls are placed so that the operator can see the pole and keep the load under perfect control. This is another example of the adapting of a BRADEN WINCH to specific handling jobs. Let us know your handling problem and we will show you how a BRADEN WINCH can be used to solve it.

Write for complete information

BRADEN WINCH COMPANY

P. O. Box 547, Broken Arrow, Oklahoma



... Legislative Year

Continued from Page 81

Connecticut increased the maximum gross weight on combinations of vehicles with a total of 4 or more axles, from 50,000 to 60,000 lb, effective October 1, 1953. Delaware increased length of buses from 35 to 42 feet and permits auto transporters a height of 13½ feet. Florida increased axle weight from 18,000 to 20,000 lb.

Idaho permits 3-axle buses a length of 40 feet on designated highways. Illinois passed a bill (not yet approved) to permit a maximum gross weight of 68,000 lb on combinations with 5 or more axles. The weight for tandem axles, however, was reduced from 32,000 to 30,000 lb. Indiana permits buses in cities and counties with a population of 160,000 or more, a width of 102 inches. Iowa changed its table of weights based on axle spacing to range from 32,000 lb for a spacing of 4 feet to 65,478 lb 42 foot spacing.

Maine permits 3-axle trucks hauling construction materials a gross weight of 48,000 lb if extreme axles are not less than 16 feet apart. Maryland repealed the provision that would have eliminated the formula 850 (L + 40) as of June 1, 1953. Missouri permits buses and trolley buses a length of 40 feet if equipped with 3-axles. Montana increased maximum gross weight under its table to 76,800 lb. Nebraska permitted a length of 40 feet for buses equipped with 3-axles.

A New York bill that would have permitted buses a length of 40 feet was vetoed by the Governor, but he approved another law that permits city buses a length of 40 feet, if permitted by local laws and ordinances.

North Carolina permits auto transporters a height of 13½ feet if gross weight is not over 40,000 lb. That state also repealed a law requiring 300 cubic inches piston displacement in the motive power of vehicles or combinations over 40,000 lb. Another law provides a tolerance of 1000 lb on axle weight. Oklahoma increased height from 12½ to 13½ feet. Oregon provided no vehicle in a combination shall exceed 35 feet in length.

Several proposals to increase the gross weight of tractor semi-trailers are pending in the Pennsylvania legislature. Tennessee eliminated its formula and provides a table of weights based on axle spacing, graduated from 32,000 lb if spacing is four feet to 55,980 lb if spacing is 37 feet. Bus length was increased from 35 to 40 feet, with gross weight limited to 42,000 lb. Texas now

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MECHANICS WHO SERVE BEST
Specify **Belden**
WIREMAKER FOR INDUSTRY

... Legislative Year

Continued from Page 170

permits buses a length of 40 feet if equipped with air brakes and a minimum of four tires on the rear axle.

Washington amended its table of weights based on axle spacing to provide gross weights for axle spacing from 3½ feet to 18 feet and from 18 feet to 53 feet or more. Gross weights, however, were not changed. A new law in Wisconsin permits buses a length

of 40 feet and a proposal to increase the maximum length of combinations from 45 to 50 feet has passed both Houses. Wyoming increased height limit from 12½ to 13 feet.

Equipment

TWENTY state legislatures considered proposals to require mudguards on trucks and trailers, but they have been enacted in only two additional states—Colorado and Iowa. Minnesota amended its provisions on this subject.

Five states—Florida, New Mexico, North Dakota, Oregon and South Dakota—enacted amendments to their safety glass requirements. Amended brake requirements generally to conform more closely to the Uniform Code, were enacted in Colorado, Idaho, Michigan, Nevada and New Mexico.

Idaho and New Mexico amended their requirements for flares to bring them into substantial conformity with the Uniform Code. California authorized disabled commercial vehicles to display Class A—Type I turn signals until flares, lanterns or reflectors can be placed in required position. Indiana authorized the use of reflector type flares in lieu of electric type lanterns or flares. Iowa reduced the distance that reflectors must be visible from 500 to 300 feet. Massachusetts requires disabled vehicles at night to use flares, even though streets or highways are lighted artificially.

In Delaware, all new vehicles licensed after July 1, 1953, must be equipped with approved turn signal devices. North Carolina will require such units on every new vehicle manufactured or assembled after July 1, 1953, which is sold or registered.

New laws in Iowa, Nebraska, New Mexico, South Dakota and Washington make it unlawful to sell, offer for sale, or operate new vehicles manufactured or assembled after January 1, 1954, unless they are equipped with approved turn signals. A New Jersey law prohibits registration of vehicles manufactured after July 1, 1954, unless equipped with approved signals. Similar laws in Idaho, Vermont and Wisconsin apply to new vehicles manufactured or assembled after January 1, 1955.

Proposals pending in Illinois (passed both Houses), Ohio (passed House), and Pennsylvania (passed House) would require such devices on all new vehicles. These proposals were defeated in Connecticut, Maine, Maryland, Missouri and Montana.

The New Mexico law also provides that any vehicle so constructed that the distance from the center of the top of the steering post to the left outside limit of the body, cab, or load exceeds 24 inches, or exceeds 14 feet from the steering post to the rear limit of the body, or load, must be equipped with turn signals. This provision has become law in Connecticut and Missouri, and is pending in Ohio. The Missouri law is applicable only to such new vehicles registered in the state after January 1, 1954. A new law in Maine (effective January 1, 1954) requires trucks and buses to be equipped with turn signals when hand and arm signals are not visible to the front and rear.

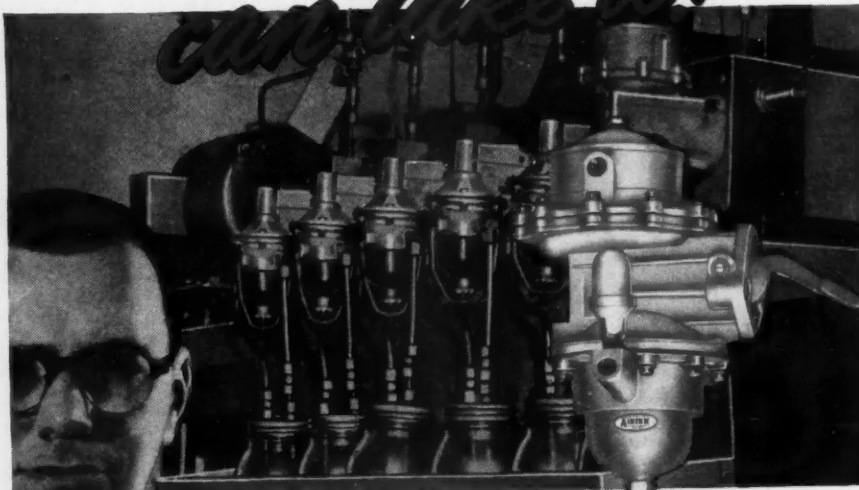
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Please Resume Reading Page 82

Grueling Endurance Tests PROVE

AIRTEX FUEL PUMPS

can take it!



**PERFECT OPERATION THROUGHOUT
99,000-MILE "TORTURE TEST"**

AIRTEX FUEL PUMPS, taken at random from regular production, must pass through 1200 hours of continuous operation at 83-m.p.h.—almost *four times* around the earth! This grueling punishment is *your guarantee* that AIRTEX Fuel Pumps will stand up under the most strenuous driving, to bring your customers long-lasting, dependable performance.

**ORDER FROM YOUR JOBBER
TODAY—or write direct**

AIRTEX

AIRTEX AUTOMOTIVE DIVISION

World's Largest Independent Fuel Pump Manufacturer



The new "Co-view sight-seeing" manufactured by M Industries, Ltd. Canada.

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CLOSE-COUPLED **POWER TRANSMISSION** **PROBLEMS LIKE THESE:**



The new "Courier" Skyview sight-seeing bus manufactured by Motor Coach Industries, Ltd., Winnipeg, Canada.



50N Series Assembly. Only 18" overall with 22½° angularity.

SOLVED for SURE **with BLOOD BROTHERS propeller shafts**

On rear-engine buses, power must be transmitted from engine to differential with allowance for extreme angularity. Yet performance must be smooth, efficient and dependable.

When bus manufacturers like Motor Coach Industries, Ltd., specify Blood Brothers Propeller Shafts, it's obvious that these components meet all tests. The 50N Series Assembly is tough, long-lived and carefully balanced—like *all* Blood Brothers Drive Lines.

When *you're* up against truck or bus propeller shaft problems, call on our engineering department for suggestions. Perhaps *your* problem can be solved for sure—with Blood Brothers Drive Line Assemblies.



BLOOD BROTHERS machine co. ALLEGAN, MICHIGAN
UNIVERSAL JOINTS AND DRIVE LINE ASSEMBLIES

A Division of Standard Steel Spring Co. • Chicago Office: 122 S. Michigan

COMMERCIAL CAR JOURNAL, August, 1953

Bendix Announces Linkage Type Power Steering

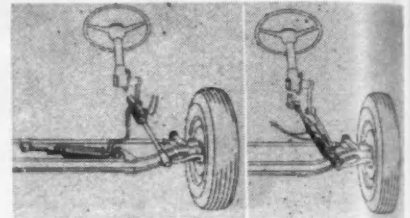
NEW linkage type power steering is in production at Bendix Products Division, Bendix Aviation Corp., South Bend, Ind.

With this type of power actuation, installation of the power cylinder and

control valve (not a field installation), can be made by the vehicle manufacturer without changing the geometry of the steering linkage. In effect, the existing steering system, including the steering gear, remains intact.

The hydraulic power cylinder is mounted at any convenient place where it can be connected to act directly upon the steering cross rod or equivalent member. Power for steering is then applied in a straightline motion to the steering linkage of the vehicle.

Control valve of the two-unit type installation, at left in illustration, which



is being currently used on passenger cars, is mounted at one of the ball joints, usually at the Pitman arm. A small movement in the valve serves to open and close hydraulic ports, to operate the double-acting power cylinder.

An alternate type unit, at right in illustration, combines the control valve with the power cylinder. This gives a simpler and more compact installation where surrounding design permits.

In Operation

EITHER the composite single unit type or the two unit type with the separate control valve can be used, which ever suits the space and placement conditions of the individual vehicle. Normal operation of the steering gear and system by physical effort is not interfered with in any way if the engine is not running and there is no hydraulic pressure.

A reaction force is set up in the control valve proportional to the hydraulic pressure in the valve and in the power cylinder, tending to always return the valve to neutral position for straight ahead steering. This also gives the driver a natural "feel" of the steering force being exerted and prevents over steering.

If desired, the control valve can be furnished with a centering spring which spring loads the valve in the neutral position. This has the effect of increasing the physical force required before power steering begins if this is desired in the individual application.

Fork Lift Operator: "Boy, what in the world is eatin' you?"

Freight Packer: "Aw, it's nuthin', I don't guess. Just off my food a little, maybe."

Fork Lift Operator: "Don't kid me, big boy. One minute you're unhappy and the next minute you seem care-free and gay. What ails you?"

Freight Packer: "Change of wife."

COMMERCIAL CAR JOURNAL, August, 1953

LEADERSHIP IN LAMPS



Photometer measures lamp candlepower and is one of many tests in Tung-Sol's quality control procedure.

Tung-Sol has specialized in the design and manufacture of miniature lamps ever since electricity replaced oil for automotive lighting. Tung-Sol was first with Tulite, a double filament lamp and first with the fixed focus headlamp.

Today Tung-Sol offers the truck and bus industry a complete line of 12-16 volt lamps made extra-tough for extra-tough service. Tung-Sol performance standards are the highest in the industry and are the same for original equipment and replacement. To get the best in lamps, specify Tung-Sol when ordering from your supplier. You'll find your lamp dollar will go farther.

TUNG-SOL ELECTRIC INC., Newark 4, N. J.
Sales Offices: Atlanta, Culver City (Los Angeles),
Chicago, Dallas, Denver, Detroit, Newark,
Philadelphia, Seattle

TUNG-SOL®
AUTO LAMPS
SIGNAL FLASHERS



TUNG-SOL makes All-Glass Sealed Beam Lamps, Miniature Lamps, Signal Flashers, Picture Tubes, Radio, TV and Special Purpose Electron Tubes and Germanium Products.

For DEPENDABLE
OVER-THE-ROAD
SERVICE

KATHANODE

multi-power BATTERIES

- MULTIPLE PLATE CONSTRUCTION
- GENUINE HARD RUBBER CONTAINERS
- LIFEGUARD INSULATION
- HYDRO-SET OXIDE



REG. U.S. PAT. OFF.

THE KATHANODE CORP.

A SUBSIDIARY OF GOULD-
NATIONAL BATTERIES, INC.
SAINT PAUL 1, MINNESOTA

FACTORIES: Atlanta - Chicago - Dallas
Depew - Huntington - Kankakee - Leavenworth
Los Angeles - Lynchburg - Marlboro - Memphis
Monroe - North Bergen - Rock Island - St. Paul
Trenton - West Salem - Zanesville

Get the Most Out of Heating Dollars

Continued from Page 87

finned coil instead of the tubular heat exchanger found in direct-fired units. Usually the heat output is controlled either by stopping or reducing the speed of the fan which recirculates the air over the coil surface.

Most unit heaters operate on a 110-volt circuit, and gas-fired heaters are available for operation on LP gas,

mixed, natural or manufactured gas. Most systems include a thermostat control which reduces the flow of warm air from the heater whenever the area is at the desired temperature.

Suspended propeller-driven fan units for horizontal air flow are the most commonly used unit heaters on a nationwide basis. They are available in mod-

els which deliver from 15,000 to 1 1/2 million BTU per hour, with air flows of 300 to 5000 cfm. Units which blow in a downward direction frequently give more satisfactory performance in shops and on loading docks with high ceilings. Dealers will recommend the preferred height for suspended units to best suit individual conditions.

Heaters equipped with blower fans deliver up to 1 1/2 million BTU per hour and offer air flows up to 20,000 cfm. Blower units equipped with centrifugal fans give longer heat throws than some other types of unit heaters, work well against resistance caused by frequently opened doors or high objects and can be effectively employed where duct work is required. Blower fan units may be fitted with cowls or hoods which direct their air streams where desired.

Installation of gas or oil heating units of any type requires that the following check points should be carefully considered:

1. For gas units; is service to the building and the piping system adequate and of sufficient capacity?
2. What special piping is required to supply fuel runs to various heater locations?
3. Where are existing chimney flues?
4. Are roof vents necessary?
5. Is an exhaust fan required?
6. Are there any exhaust fans in the building that create excessive air changes, ventilation or negative pressures which will interfere with proper venting?
7. Is the building's electric power supply sufficient for the proposed heater system and is unusual wiring required?
8. Is the proposed installation such that extensive duct work is desirable or necessary?

Recessed Radiators

RECESSED wall radiators are available in sizes having outputs varying from 25,000 to 60,000 BTU. A 25,000 BTU unit will heat approximately 30,000 cubic feet in a well-insulated building having a minimum of doors and windows. Gas flames pass through one to three zinc coated steel tubes 2 inches in diameter. The heat thus generated is pushed into the area to be heated by steel reflectors placed behind the tubes.

Varying in height, these radiators are usually 14 in. wide and 6 in. deep. Four inches of this depth is buried in the wall, while the other two inches protrude.

Because heating units of this type are vented, they can operate at only 80 per cent efficiency. However, because they are set five feet above the floor, their heat is evenly distributed and less of

(TURN TO PAGE 178, PLEASE)

COMMERCIAL CAR JOURNAL, August, 1953

for greater safety



for flares . . . see K-D's complete line

A few examples of K-D's line of reflector, kerosene and electric flares . . . typical K-D completeness.

KD 609 Heavy duty flare with 3" diameter Red Lucite Plastic Stimsonite lens. Visibility at extremely long distances with wide range from jewel-like sharpness of prism edges. Exceeds ICC and SAE requirements. Folds up like camera. Available singly or set of three with sturdy mounting bracket.



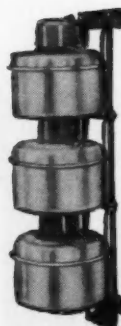
KD 609



KD 610

KD 610 Heavy steel legs grip pavement regardless of wind velocity. Same lens as KD 609. 45° flag staff holders. Sold singly or three in metal box with or without flags.

KD 601-3 Gangway bracket set of three kerosene flares with extra heavy U-shaped bracket. Dependable burner. 12-hour burning time in rain, snow, or 45-mile wind.



KD 601-3



KD 600-3

KD 600-3 Three Saftee kerosene flares in sturdy metal box. 42-oz. pot easy to fill . . . holds flag staff. Burner easy to clean . . . cap chain-fastened. • KD 600-3A includes three flares, fusee tray, and three flags in metal box.

K-D LAMP COMPANY

1910 ELM STREET
WAREHOUSES: CHICAGO

CINCINNATI 10, OHIO
LOS ANGELES - NEW YORK



TESTED and found best!

That's why Alpena Wholesale Grocers chose
SHELL RIMULA OIL
 for their diesel trucks



Operators of heavy, over-the-road diesel trucks customarily overhaul at 100,000 to 250,000 miles.

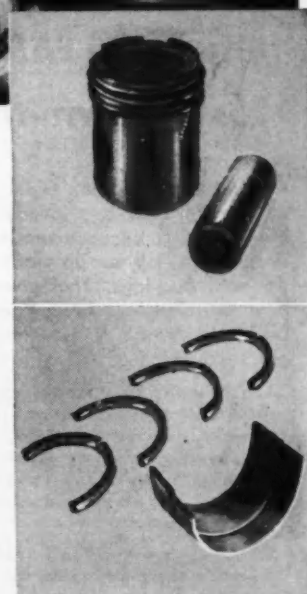
Well, here's a story that amazed the operator! Recently, a Cummins powered trailer tractor—owned by the Alpena Wholesale Grocers, Alpena, Mich.—pulled in for a major overhaul. *It had gone 275,000 miles without the oil pan having once been dropped.*

When the engine was stripped down, astonished mechanics found parts so clean and so little worn it was hard to believe the truck had gone even half its operated mileage. Cylinder taper was a mere 0.001. Rings were good and showed negligible deposit. Bearings showed very little wear; were

good enough for further service.

Alpena credits these remarkable results in engine life to Shell Rimula Oil . . . a new highly fortified type created for severe service in both diesel and gasoline engines. The change-over to Shell Rimula Oil was made after the truck had gone 100,000 miles, without flushing or clean-up. While there was a slight increase in oil consumption immediately following the change-over, after a few thousand miles oil consumption was reduced.

If you have problems of ring sticking, sludging, or excessive wear—in diesels or commercial gasoline engines under unusual service conditions—new Shell Rimula Oil may revolutionize your maintenance practices, too! Write for the complete story.



After 275,000 miles, these normally high-wear parts are still fit for service! Note lack of wear on piston skirt cross-hatching. Rings are good, with almost no deposit. Bearings are in unusually fine condition. The piston pin, a critical part, shows amazingly small wear for the mileage.



SHELL OIL COMPANY

50 West 50th Street, New York 20, New York; 100 Bush Street, San Francisco 6, California

St. Paul
HYDRAULIC

HEAVY-DUTY HOISTS



**Give you FASTER, EASIER DUMPING with
less down-time, lower maintenance!**

On big yardage jobs especially, you can't afford to be "penny-wise" in buying hoists because one hoist failure can quickly eat up many hours of payload earnings. That's why it will pay you to standardize on new St. Paul heavy-duty hoists because only St. Paul gives you:

1. **New stress-proved design**—with 25% greater lifting leverage, plus new friction-free hydraulic system, stronger equal-lift strut arms, replaceable bushings, and over 50 other advanced mechanical improvements.
2. **New "work-rated" capacities**—with extra safety factor to minimize danger of overloading and insure extra hours of trouble-free performance.

Your St. Paul Distributor will gladly analyze your hoist problem and recommend the St. Paul model best suited to your needs. Call him today. St. Paul Hydraulic Hoist, Customer Service Dept., 36131 Main St., Wayne, Mich.

6 New Heavy-Duty Models for every size body!

| | |
|--|--|
| <p>9' to 13' body</p> <p>8 to 12½-ton cap.</p> | <p>10' to 14' body</p> <p>8 to 12-ton cap.</p> |
| <p>10' to 16' body</p> <p>10 to 17½-ton cap.</p> | <p>10' to 16' body</p> <p>13 to 22½-ton cap.</p> |
| <p>10' to 16' body</p> <p>16 to 27½-ton cap.</p> | <p>10'6" to 14' body</p> <p>3 to 8-yd. cap.</p> |

S-HC-3

OUR 41st YEAR

St. Paul
HYDRAULIC HOISTS

Send for your FREE copy of the new St. Paul heavy-duty catalog—just fill the post!



St. Paul is recognized as the leader in cost-saving features.

... Heating Dollars

Continued from Page 176

it is wasted. Recessed wall radiators are a particularly safe type of heating unit, because the vents draw off any gas fumes which might accumulate should the heater fail to function properly.

Radiant Heating

RADIANT heating systems are becoming increasingly popular with fleet operators throughout the country. They employ coils of pipe built into the concrete shop floor. Heat is provided by steam or boiling water passing through the coils. Another type of radiant heating system has radiation supplied by plates or panels belted to the walls or ceilings.

Radiant heating boasts the advantage of heating objects within its area of radiation without affecting the air in the immediate vicinity of the object. As a result, cooler, more comfortable working conditions prevail and less heat is wasted.

It should be remembered that the most satisfactory conditions are obtained when the heat supply and the air circulation of an area are constant—provided that the heat supply is adequate and the air circulation is draftless. This may be accomplished by installing a number of units whose combined heating capacity overcomes the heat loss of the building.

Positioning Heaters

CARE should be taken when the heating system is installed that the heating units are positioned to provide maximum heat per unit and to avoid wasted heat. Correct positioning will be reflected in lower fuel costs and greater comfort.

In planning heating unit positions, first consideration should naturally be given to city fire ordinances, insurance regulations and codes and similar rulings. Usually, the direction of the warm air stream should be parallel and in close proximity to the source of principal heat loss. Care should be taken not to direct the air stream directly at workbenches where employees spend considerable time. Likewise it is not advisable to utilize the space behind or under heating units for regular work because of the return flow of cooler air. In shops, gas-fired equipment should be placed at least eight feet above floor level as a precaution against fire.

In small areas, the heating unit should be located so as to direct warm air toward the severest exposure, but

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WHETHER your trucks run on level highways or in hilly country — the best way to assure more miles from a gallon of fuel is to use *Texaco D-303 Motor Oil* in your engines — heavy duty gasoline or Diesel.

Fully detergent and dispersive, *Texaco D-303 Motor Oil* cleans as it lubricates — keeps valves and rings free for full compression and full combustion. Your clean engines won't waste fuel fighting power-robbing carbon deposits — they'll put all their fuel energy on the road where it belongs.

For dependable *chassis* lubrication, use *Texaco Marfak*. This tough, clinging lubricant stands up under heavy loads — will not squeeze or pound out. *Texaco Marfak* assures extra hundreds of rust-free, wear-free miles.

In wheel bearings use *Texaco Marfak Heavy Duty*. It seals itself in — seals out dirt and moisture, assures safer braking. No seasonal change is required. *More than 500 million pounds of Texaco Marfak have been sold.*

Let a Texaco Lubrication Engineer help you get more fleet miles for your fuel and maintenance dollar. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

Lubricants and Fuels

FOR THE TRUCKING INDUSTRY

**An AC
Engineering
Exclusive!**



AC's patented CORALOX was the first spark plug insulator especially engineered to keep pace with the development of modern truck and coach engines.

Getting hot quicker to burn away oil and wet carbon deposits — and resisting the deposit of oxide coatings — CORALOX stays cleaner.

Staying cleaner, CORALOX insures smoother, steadier firing — increases gasoline mileage — and reduces the frequency of service.

For maximum spark plug performance and long life — Get ACs — only spark plug with patented CORALOX.

**Factory Equipment on More New Commercial
Vehicles Than Any Other Brand**

AC SPARK PLUG DIVISION



GENERAL MOTORS CORPORATION

BROOKS—75 years young — logs over 8,000,000 miles a year with Champions!



C. Fair Brooks, President
BROOKS TRANSPORTATION CO., INC.

TIMELY TIPS

After abrasive cleaning of a spark plug, open the gap slightly and file the electrode sparking surfaces vigorously enough to obtain bright, clean, "virgin" metal. Removing this oxidized metal greatly lowers sparking voltage requirements. Use a distributor point file or the one on the WG-300 gap tool.



BROOKS
SERVING INDIVIDUALS AND FIRMS SINCE 1878

COMPLETE TRUCK TRANSPORTATION SERVICE
DAILY FAST FREIGHT HOUSEHOLD GOODS
MOVING, STORAGE, WAREHOUSING

Please Address Your Reply to Writer at
1201 NORTH BOULEVARD
RICHMOND 4, VIRGINIA

Champion Spark Plug Company
Toledo 1, Ohio

May 8, 1953

Dear Sirs:

When the Brooks companies started business 75 years ago, the motive power for our wagon was a faithful horse and spark plugs were undreamed of.

Today the Brooks fleet of over 600 pieces of equipment travels more than eight million miles a year. And each of these motors is equipped with Champion Spark Plugs — as a must.

For many years in the past, we have been using Champion Plugs exclusively. We can always rely on Champions for the kind of performance so necessary in rendering dependable motor transportation service today.

Very truly yours,

BROOKS TRANSPORTATION COMPANY, INC.
C. Fair Brooks
C. FAIR BROOKS, PRESIDENT
CFB:MC

75 YEARS OF TRANSPORTATION SERVICE
BROOKS
Diamond Jubilee
1878 - 1953





Dwarfed by mammoth Dart truck
is Mrs. Ione Dickey, wife of Ernie Dickey,
general manager, Bagdad Copper Mines Corp.

World's Largest Truck

...STEERED BY ROSS

► **Modern mining behemoth**—the 60-ton Dart features *dual* wheels up *front*—*twin* diesel engines totaling 700 h.p.—32 ply 18 x 25 dual tires on all axles—240,000 lbs. gross vehicle weight—with 56,000 lbs. steering effort provided by *Ross Cam & Lever Steering* in combination with twin double-acting hydraulic boosters.

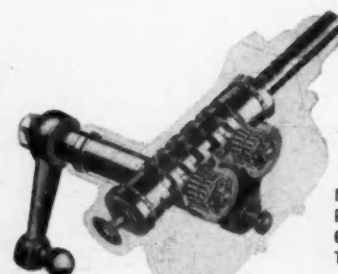
For nearly a half century, Ross has anticipated and met the ever-changing needs of the automotive industry for *easier, safer, more economical* steering. Trucks, buses, passenger cars, tractors, boats, heavy-duty work vehicles of many types depend on *Ross Steering*—either Cam & Lever Manual or Hydrapower Integral and Linkage types.

We invite discussion of *any* steering problem.

ROSS GEAR & TOOL COMPANY • LAFAYETTE, INDIANA

Ross

STEERING



Manual
Roller-Mounted
Cam & Twin-Lever
Type

CAM & LEVER MANUAL . . . HYDRAPOWER INTEGRAL . . . HYDRAPOWER LINKAGE



SERVICE PIN...for you, too

Chances are you've seen this pin. It represents 15 years of service with Socony-Vacuum. Six out of 10 of our engineers and salesmen wear it. Four out of 10 have served over 20 years. In fact, the average length of service of *all* Socony-Vacuum lubrication representatives calling on fleet operators is almost 17 years! All this petroleum engineering experience, the world's greatest, is yours when you call on Socony-Vacuum. Why accept anything less?

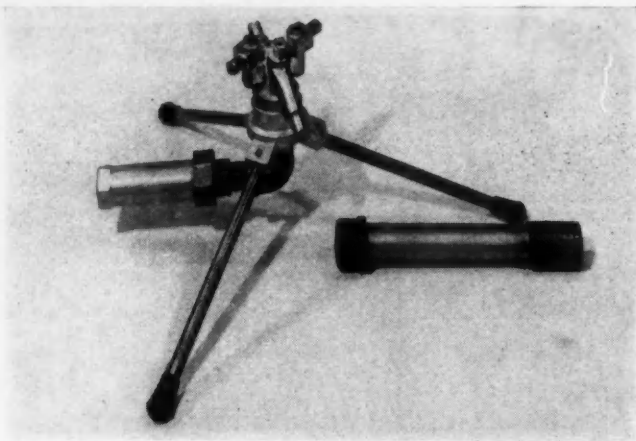
CORRECT LUBRICATION
for Fleet Operators



**WORLD'S GREATEST
LUBRICATION KNOWLEDGE AND
ENGINEERING SERVICE**

THE FLYING RED HORSE COMPANIES: SOCONY-VACUUM OIL CO., INC., MAGNOLIA PETROLEUM CO., GENERAL PETROLEUM CORP.

COMMERCIAL CAR JOURNAL, August, 1953



NEW Rotary Sprayer Simplifies Cleaning of Tank Truck Interiors

NO NEED TO CRAWL inside hot, slippery foul-smelling tank trucks to brush and hose-rinse them clean. Now, with the Oakite Rotary Sprayer, you can cut cleaning time 75%; stop rinse water waste; reduce cleaning costs.

Revolving Solution-Sprays Clean and Rinse

The Oakite Rotary Sprayer consists of a small rotating head fitted with six wide-angled flat spray nozzles. It may be positioned on tank truck bottom, tripod supported. Or clamped to manhole and suspended from tank top. Cleaning and rinsing are accomplished by simple valve manipulation.

Send for Complete Information

All information, including low rental arrangement, plus helpful drawing and specification sheet gladly supplied **FREE** on request. Oakite Products, Inc., 26D Rector Street, New York 6, New York.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
REG. U. S. PAT. OFF.
MATERIALS • METHODS • SERVICE

Technical Service Representatives in Principal Cities of U. S. and Canada



At Your Service

Continued from Page 14

Additive oils of detergent type can, if the additive is unsuitable, produce very serious difficulties. In aircraft engines, very dirty pistons will often go for long service periods without ring sticking. Pistons with silvery white skirts and ring belts may have a short and gay life, ending in a molten condition.

Exhaust valves, at least in high power aircraft engines, do not appear to be a present cause of preignition. With current practice, valve crown corrosion is still encountered but the corrosion products do not appear to cause preignition.

Sodium cooling alone will not prevent deposits on the crown which can cause preignition. Such deposits do occur with unsuitable valve materials and valves with sodium in the stem only but are not known (at least to the author) where a hollow head is used.

Preignition has been produced by steam-cooled valves of only 1 1/4 inch head diameter at 250 psi imep. This was not a random occurrence and could be repeatedly produced after only 30 hrs of operation with a new valve. It was cured by change of valve head material.

Low cost methods of preventing scaling of the heads of solid valves appear to be in sight.

How's Your Fire Extinguisher?

FIRE extinguishers need service too. Have yours been checked lately? Carbon dioxide and the cartridges in dry chemical extinguishers must withstand extremely high pressures. Chemical action during use may cause pressures as high as 150 lb psi, and vessels attacked by corrosion may become dangerous. Those 2 1/2-gal chemical units are manufactured to withstand up to 350 lb psi, but normal corrosion over a period of time, dents, ruptured seams due to mishandling will weaken the containers to the point where they become accident hazards. Be sure your extinguisher is tested and refilled periodically.

Removing Reflective Materials

AN IMPROVED methods of removing reflective emblems from automobiles without damaging the finish is described by Minnesota Mining and Manufacturing Co. Only tool needed is a putty knife with a 1 1/2-in. wide blade, plus lacquer thinner or xylol. First, strengthen the blade by cutting it off 2 to 3 in. from the handle. Then round the corners of the blade and sharpen the cutting edge.

Use the blade as a chisel. Get the blade under the edge of the emblem and slowly pry up. The average size emblem can be removed easily in about five minutes. Then rub solvent on the adhesive residue left on the finish, and wipe off completely, leaving no trace on the finish.

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August, 1953



What's a Fleet Operator think about when he "gets away from it all"?

"Wish things in the shop would be as calm as they are here . . . but maybe that's asking too much. Come to think of it, our brake problems have calmed down, thank goodness, ever since we started to use those combination Grey-Rock blocks. The drivers say they have better control . . . and shop records show increased mileage and fewer relines."

Brake blocks, brake linings and clutch facings are important factors in operating costs. Selection of the right friction materials can mean a lot in reducing costs, increasing net. You'll find out when you select Grey-Rock . . . the line that gives you the *right combination* of different friction materials for better performance and lower maintenance costs!



Grey-Rock

BALANCED BRAKE BLOCKS
BALANCED TRUCKSETS
VEE-LOK® CLUTCH FACINGS

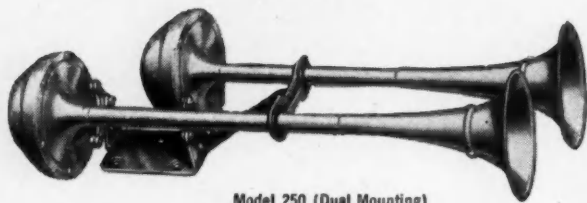
All material factory branded for your protection



GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., MANHEIM, PA.

RAYBESTOS-MANHATTAN, INC., Manufacturers of Brake Linings • Brake Blocks • Clutch Facings
Fan Belts • Radiator Hose • Industrial Rubber Products • Rubber Covered Equipment • Asbestos Textiles
Teflon Products • Packings • Sintered Metal Products • Abrasive and Diamond Wheels • Bowling Balls

Insure your fleet investment with this powerful, all-electric air horn



Model 250 (Dual Mounting)

Give your fleet the voice that *can't* be ignored . . . the mighty Sparton Tornado air horn. You'll find it one of the soundest investments you ever made. Here's why:

- 1 **It's powerful:** Gives instantaneous, long-range warning in any kind of terrain.
- 2 **It's beautiful:** Solid brass. Chrome-plating adds glitter, prevents rust. Graceful styling compliments any vehicle.
- 3 **It's rugged:** Designed for toughness and dependability. Has stainless steel diaphragm. Retains full warning power as long as there's juice in the battery.
- 4 **It's easy to install:** All-electric, can be economically installed in minutes. Just connect to electric system. No pipes to fit; no bulky tank or compressor; no motor "tapping" to run up time and cost. And no maintenance problems.
- 5 **It's tried and true:** The Tornado has proved one of the most popular horns ever produced. Now, made to the same specifications that prevailed before Korea, it's ready to take up right where it left off. Available in either single (Model 260) or dual (Model 250) mounting.

These five points add up to a smart investment for *your* fleet. Look into the Sparton Tornado today . . . send for Catalog Sheet A29-1A.

MAKERS OF QUALITY
AUTOMOTIVE EQUIPMENT
SINCE 1900

Buy U.S. Defense Bonds
today . . . for your future
security tomorrow

Sparton
AUTOMOTIVE

Division of
THE SPARKS WORTHINGTON COMPANY JACKSON, MICHIGAN

DATES and DOINGS

AUGUST

- 9-11—American Trucking Assn., Movers Conference of America, Annual Assembly, Sheraton Hotel, Chicago, Ill.
- 10-12—American Transit Assn., Annual Convention, Hotel Biltmore, Los Angeles, Cal.
- 17-19—Society of Automotive Engineers, International West Coast Meeting, Georgia Hotel, Vancouver, B. C.
- 21-22—Indian Motor Truck Assn., Annual Convention, French Lick Springs Hotel, French Lick, Ind.
- 28-29—Nebraska Motor Carriers Assn., Annual Convention, Fennelle Hotel, Omaha, Neb.

SEPTEMBER

- 5-7—Mississippi Truck Assn., Annual Meeting, Buena Vista Hotel, Biloxi, Miss.
- 10-12—Michigan Trucking Assn., Annual Convention, Whitecomb Hotel, St. Joseph, Mich.
- 14-15—Wisconsin Motor Carriers Assn., Annual Convention, Lake Lawn Resort, Lake Delavan, Wis.
- 14-17—Society of Automotive Engineers, Tractor and Production Forum, Hotel Schroeder, Milwaukee, Wis.
- 17-18—Tennessee Motor Transport Assn., Annual Convention, Greystone Hotel, Gatlinburg, Tenn.
- 17-19—Virginia Highway Users Assn., Annual Meeting, Hotel Roanoke, Roanoke, Va.
- 20-22—National Truck Leasing System, Annual Meeting, Palmer House, Chicago, Ill.
- 21—Central Motor Freight Assn., Annual Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 21-23—Truck Body and Equipment Assn., Annual Convention and Exhibit, Hotel Sheraton-Gibson, Cincinnati, Ohio
- 21-24—National Assn. of Railroad and Utilities Commissioners, Convention, Hotel Roosevelt, New York, N. Y.
- 22-26—American Trucking Assn., National Truck Roadshow, Minnesota State Fair Grounds, Minneapolis-St. Paul, Minn.
- 23-25—National Assn. of Motor Bus Operators, Annual Meeting, Fairmont Hotel, San Francisco, Cal.
- 23-27—Local Cartage National Conference, Annual Convention, Hotel Chase, St. Louis, Mo.
- 24-26—Kansas Motor Carriers Assn., Annual Meeting, Hotel Broadview, Wichita, Kan.
- 24-26—North Dakota Motor Carriers Assn., Annual Meeting, Ray Hotel, Dickinson, N. D.
- 24-26—Pennsylvania Motor Truck Assn., Fall Meeting, Galen Hall Hotel, Wernersville, Pa.
- 26—Massachusetts Motor Truck Assn., Annual Meeting, The Somerset Hotel, Boston, Mass.

OCTOBER

- 5-6—North Carolina Motor Carriers Assn., Annual Convention, Hotel Carolina, Pinchurst, N. C.
- 19-23—National Safety Council, National Safety Congress and Exposition, Commercial Vehicle and Transit Safety Sections, LaSalle Hotel, Chicago, Ill.
- 26-30—American Trucking Assn., Annual Convention, Hotel Statler, Los Angeles, Cal.
- 28-30—American Society of Body Engineers, Annual Technical Convention, Rackham Memorial Bldg., Detroit, Mich.
- 29-Nov. 1—Automotive Parts Rebuilders 1953 Convention, Sherman Hotel, Chicago, Ill.

NOVEMBER

- 2-3—Virginia Passenger Bus Assn., Annual Convention, Roanoke Hotel, Roanoke, Va.
- 2-4—Society of Automotive Engineers, Transportation Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 3-4—Society of Automotive Engineers, Diesel Engine Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 5-6—Society of Automotive Engineers, Fuels and Lubricants Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 5-7—Idaho Motor Transport Assn., Annual Convention, Hotel Boise, Boise, Idaho.
- 7—New Hampshire Truck Owners Assn., Annual Convention, Hotel Carpenter, Manchester, N. H.
- 9-12—American Petroleum Institute, Conrad Hilton Hotel, Chicago, Ill.

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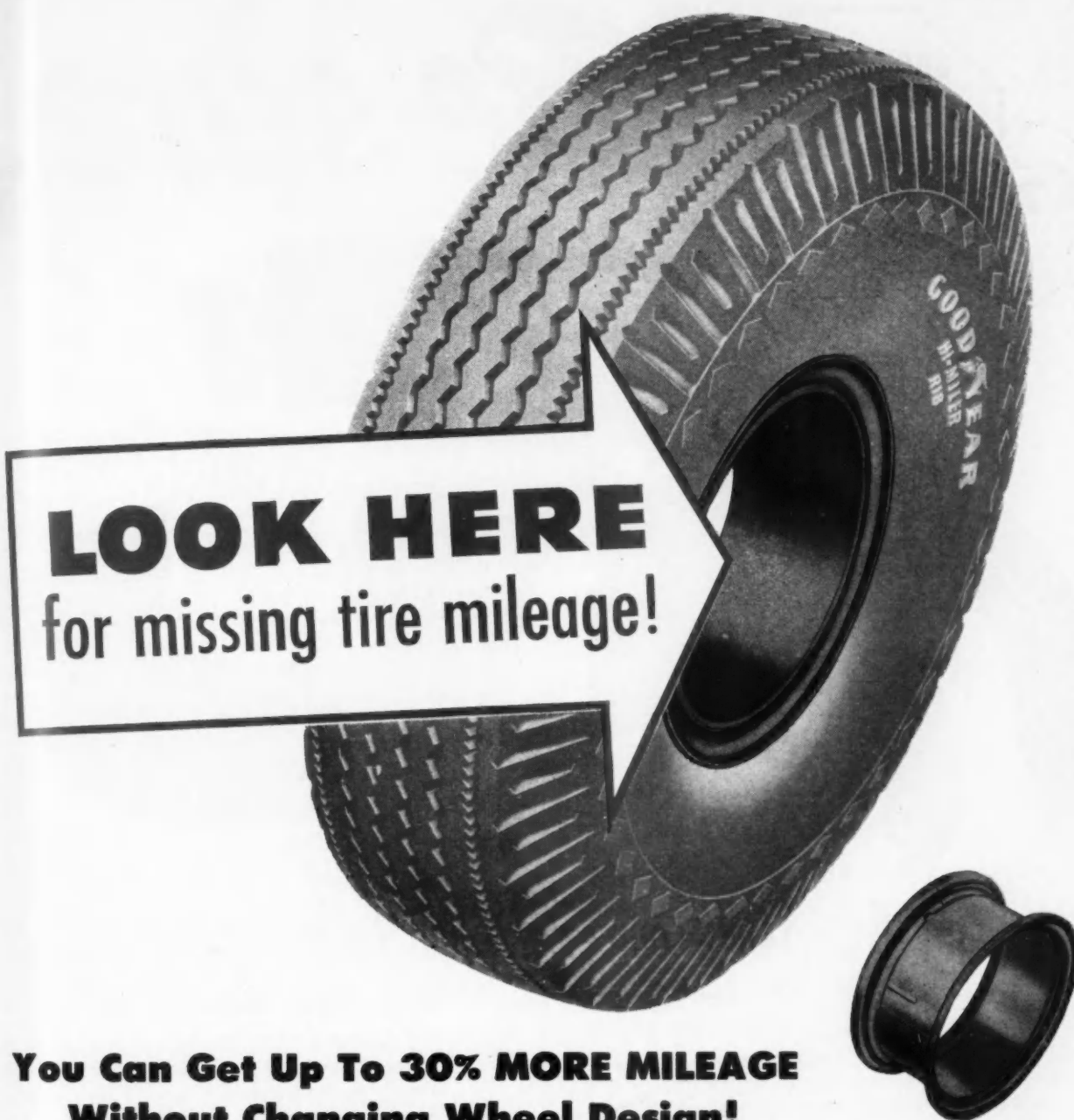
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You Can Get Up To 30% MORE MILEAGE Without Changing Wheel Design!

WITHOUT costly change-overs of wheels or wheel designs, you can get up to 30% or more increased tire mileage, simply by changing over to Goodyear 70 Series Wide Base Rims on your vehicles.

No guesswork about it — it's been proved on hundreds of trucks and buses in all sorts of service. These rims will interchange with all demountable rims with standard 28° mounting bevel—provide all the advantages of wide base

tapered bead seat rims — greater air volume, less tire heat, fewer tire failures, more and better tires for recaps and fewer road delays. They give you all this *on your present wheels*, because there's a rim for every tire size, and uniform design throughout the entire size range.

Ask for full details today at your nearest Goodyear Rim supplier or write Goodyear, Metal Products Division, Akron 16, Ohio.

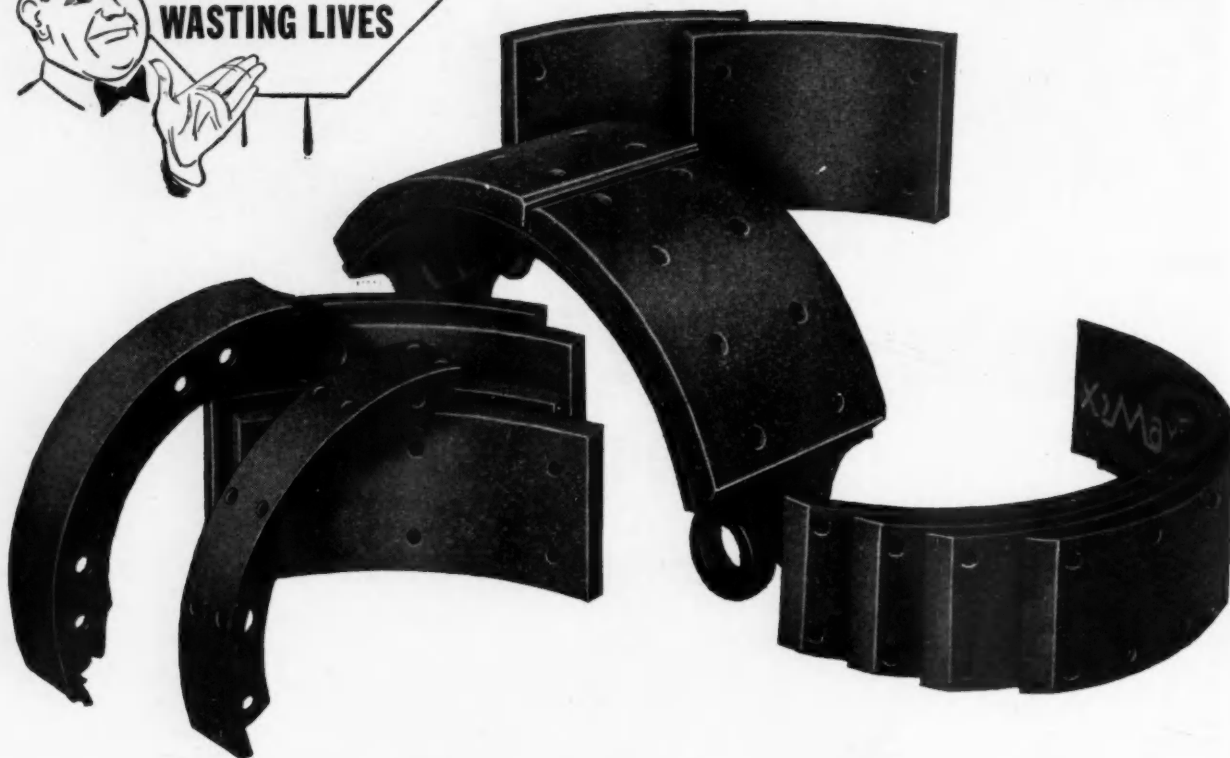
GOODYEAR

WIDE BASE RIMS

MORE TONS ARE CARRIED ON GOODYEAR RIMS THAN ON ANY OTHER KIND



Be sure....



...and all from **ONE** source..... your Wagner jobber....

WAGNER LOCKHEED HYDRAULIC BRAKE FLUID

Don't take chances—standardize on Wagner Lockheed Hydraulic Brake Fluid No. 21-B. It is a premium quality fluid that surpasses S.A.E. specifications and is ideal for use in trucks, tractors, trailers and buses. It is chemically balanced to withstand the rugged, heavy-duty service that modern, over-the-road service entails.



WAGNER LOCKHEED HYDRAULIC BRAKE PARTS

This complete line covers every make and model of vehicle, and includes seldom-used, slow-moving parts not easily obtainable elsewhere . . . perfect fit and functioning is assured.



Wagner

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • NoRoL • CoMaX BRAKE LINING • AIR BRAKES

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...be safe....

RELINE WITH
WAGNER
BRAKE LINING
FOR QUICKER, SAFER STOPS

Don't let YOUR fleet add to the needless fatalities on America's highways . . . for lack of good brakes. Standardize on performance-proven Wagner Brake Lining, the high quality lining that's engineered to the brake on which it is to be used.

As a pioneer manufacturer of hydraulic brakes, Wagner *knows* what qualities are required in brake lining, and those qualities are found in Wagner Brake Lining.

You can put your confidence in Wagner Brake Lining. It is unsurpassed for quick, safe, smooth stops. Ideal for heavy-duty service under severest driving conditions. The same excellent frictional qualities last throughout the life of the lining despite excessively high operating temperatures.

Wagner Brake Lining contains no abrasive materials to injure drums . . . will never compress or swell . . . does not deteriorate with age . . . will not absorb moisture. Available in sets, blocks, rolls, slabs, cut segments, and on shoes, either bonded or riveted. Coverage is complete for every car, truck, tractor, or bus.

See your Wagner jobber, or write us for details.



...the best known
name in brake service

DO YOU KNOW?

. . . that Wagner Hydraulic Brakes are designed, engineered, and produced to allow interchangeability of parts to help make the repair job trouble-free for the mechanic? Interchangeable parts make items fast-moving with resulting price advantages. Inventory is simplified and stock requirements are reduced.

You can rely upon WAGNER QUALITY because Wagner Products are used as original equipment by car, truck, and bus manufacturers.

WAGNER ELECTRIC CORPORATION
Dept. SPD, 6470 Plymouth Ave.
St. Louis 14, Missouri

Here's My Dollar . . . Send me a copy of the New **BRAKE SERVICE MANUAL**, the most helpful, complete brake service guide ever published—50 pages of valuable information and over 200 "how-to-do-it" illustrations.

NAME _____
COMPANY _____
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853-48

TACHOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS

INDUSTRIAL CRANE BRIDGE BRAKES

TIMELY TOPICS by UNITED MOTORS SERVICE



Plan for Profits with world-famous GENERAL MOTORS Parts and Accessories

DELCO BATTERIES
Packard CABLE
INLITE BRAKE LININGS
MORaine ENGINE BEARINGS
ROCHESTER CARBURETORS
HARRISON THERMOSTATS
DELCO AUTOMOTIVE MOTORS • CLOCKS
Saginaw JACKS
NEW DEPARTURE BALL BEARINGS
Delco-Remy STARTING • LIGHTING
IGNITION

HYATT ROLLER BEARINGS
KLAXON HORNS
ROCHESTER CIGAR LIGHTERS
HARRISON RADIATORS
DELCO SHOCK ABSORBERS
AC GAUGES • SPEEDOMETERS
DELCO ELECTRONIC PARTS
MORaine GASOLINE FILTERS
DELCO BRAKE PARTS • FLUID
Guide LAMPS

United Motors
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This new di
keeps the fl
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deteriorates
rubber cup

ONE CAR SERVI

To replace
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TIMELY TOPICS by UNITED MOTORS SERVICE

MERCHANDISING • ADVERTISING • PRODUCTS



EXCLUSIVE! SPECIAL BRAKE FLUID DISPENSER



United Motors is making a special offer of a plastic dispenser for brake fluid. This new dispenser is easier to use and keeps the fluid clean and ready for use. A common error is to use one container for many purposes with the result that foreign matter enters the brake line and deteriorates the rubber parts. The rubber cup shown above (extreme left)

is an example of the damage done by one drop of oil in the brake line. Note how the cup has swollen in relation to the brass washer at its base. Just rinsing a brake fluid can with gasoline may cause this amount of damage—which demonstrates the importance of getting the Delco Brake Fluid Dispenser.

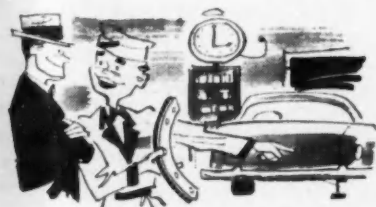
ONE CARBURETOR REPAIR KIT SERVICES ALL CHEVROLETS

To replace many kits and part numbers Rochester Products now is putting out one complete repair kit for all Chevrolet carburetors. This not only will save time in ordering and stocking, but also will eliminate the possibility of buying the wrong kit for a job. Individual gasket kits are available for specific models. The part number of the new Rochester kit is 7004363. It services all Chevrolet passenger cars from 1932 through 1953 using Rochester carburetors.



DELCO LINED BRAKE SHOES SAVE MECHANICS' TIME

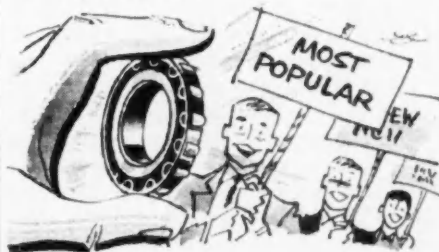
Factory lined brake shoes, available for all Chevrolet passenger cars and 1/2-ton trucks, save much in time and give new-car brake performance. Three sets service all models. Using these sets assures you of perfect brakes, as relined shoes often are warped and give trouble. The Delco Brake sets are lined with Inlite brake linings—the same as used originally—cut repair time to a minimum.



A JACK IN TIME SAVES HAULING CHARGES



Many fleet operators have found it profitable to equip their vehicles with a Saginaw Jack—saving much in lost time and service charges. The recirculating ball principle, exclusive in Saginaw Jacks, makes it a simple matter to raise light trucks as well as passenger cars. It's always better to have one and not have to use it—than be without one when you need it!



HYATT SPHERANGULAR BEARINGS GAIN IN POPULARITY

The unique function of Hyatt Spherangular bearings has caused a marked increase in their use throughout the automotive industry. The curve of each roller in this bearing is based on a small segment of the large circle. As the load increases, causing a minute depression of the roller, additional surface of the cups, cones and rollers comes in contact, automatically increasing the load capacity of the bearing. Hyatt Spherangular bearings take both radial and thrust loads, and are self-aligning, thus conform to any deflections that may develop under extreme loads.

"TAKE IT OFF!" is the title of a colorful and interesting movie prepared by United Motors to explain the necessity of quality brake fluid and how it pays off in safety and lower repair bills.

NEW DEPARTURE PUTS A "FUN-HOUSE" GAG TO WORK AT PLANT



Our first choice under the heading of "Jobs We'd Like to Have" is that of the air jet operator at the New Departure ball bearing plant. It seems that some precision instrument bearings are so delicate that even a tiny speck of lint or dust could throw them off. To combat this, New Departure manufactures these bearings in a special air-conditioned room and requires the female employees to wear nylon uniforms. As a further measure of precaution, these charming ladies get a short blast of compressed air to remove all lint.

A Harrison engineer was heard to say—"Few people realize the full value of a thermostat. Using the correct 'stat' for the season can mean a smoother running engine and increased gasoline mileage."

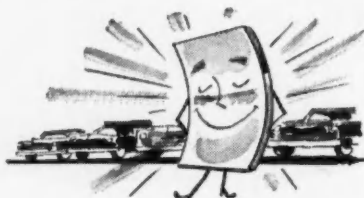
NEW ELECTRO-CHECK PROVES QUICK AND ACCURATE



The new Delco battery Electro-Check has an easy-to-read scale and is accurate within 1/100th of a volt. In addition to a new and durable plastic case, the Electro-Check features a new prod that's guaranteed not to break even under severe usage. Testing procedures for both 6- and 12-volt batteries are outlined on the back of the meter, making it possible for the fleet serviceman to make quick and accurate check of all batteries.



**BEARINGS ARE NO LONGER
THE LIMITING FACTOR
IN ENGINE PRESSURES**



There are many ways that engine power could be increased—higher compression, enlarged valve openings, changing the design of the cams, souped-up electrical systems, improved carburetion—but all of this in the past has been limited as to how much pressure the main and connecting rod bearings could stand. Now however, engineering tests have proved this to be no longer the case. The newly developed Moraine 400 aluminum bearing shows remarkable resistance to loads and pressures—and with this new alloy, engine bearings are no longer the limiting factor in engine design.

• • •

Even with the smooth ride made possible with tracks, many railroad cars are equipped with shock absorbers. And now in the truck industry a definite trend has been noticed toward outfitting equipment with Delco shocks for protection of cargo and for the reduction of maintenance costs.

• • •

**PACKARD CABLE
PERFECTS NEW INSULATION**



A new type plastic insulation for use on low tension cable and designated as "249" is being produced by Packard Cable. "249" insulation offers greater dielectric strength and will not support combustion. Also of great interest to the trade is its increased resistance to oil, chemicals, abrasion and extreme temperatures. "249" insulation is used on all Packard low tension and lighting cable.

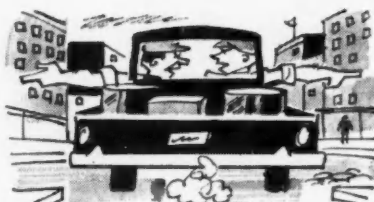
• • •

A filter produced by Moraine Products Division of General Motors, although all metal, will separate water from gasoline!

TALK ABOUT TRAFFIC! It's estimated that 60 million Americans use motor vehicles to get to and from work or school every day, and that traffic bottlenecks cause the average driver to lose 10 minutes on each trip. This means a total daily time loss of 20 million hours!

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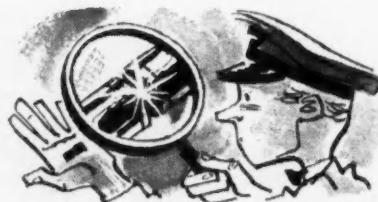
GUIDE TO SAFETY FIRST!



In an endeavor to reduce accident rates, many states are now demanding use of direction signals on all vehicles—others are considering legislation to this effect. It is predicted that in the not too distant future direction signals will be required in *all* states. This is a safety measure all fleet owners will want to support. Working with state legislative bodies and safety councils, Guide Lamp has designed turn indicators to comply with all existing laws and through national distribution is in a position to extend quick and convenient service when the need arises.

**REGULATOR POINTS NEED
REGULAR ATTENTION**

Every time the vibrating points of a generator regulator separate, an arc is formed causing the transfer and oxidation of point material. This necessitates a regular check of the points to assure peak engine performance. As a preventive measure all Delco-Remy regulators use tungsten on the negative contact point as tungsten tends to transfer less than any other material. The positive contact point on the hot side of the circuit is made of platinum or palladium, which tend to oxidize less than any other known metal. Even with these precautions it is necessary occasionally to clean regulator contacts.



**NEW INSULATOR FOR
DELCO-REMY REGULATORS**

In early production of 1118300 and 1118700 type regulators the contact attaching screws were insulated from the contacts and brackets by two 1878507 insulators and two 1878506 bushings. Later the design was changed to use a moulded insulator with extrusions which served as bushings. The new moulded insulator is Part No. 1922599. It may also be used to replace 1878506 bushing and insulator in the 1118200 type regulators. Due to the fact that the old insulator and bushing are used in other locations, the old part numbers have not been superseded.

• • •

In testing carburetors, Rochester Products uses enough fuel in a year to make four theoretical round trips to the moon by automobile!

• • •

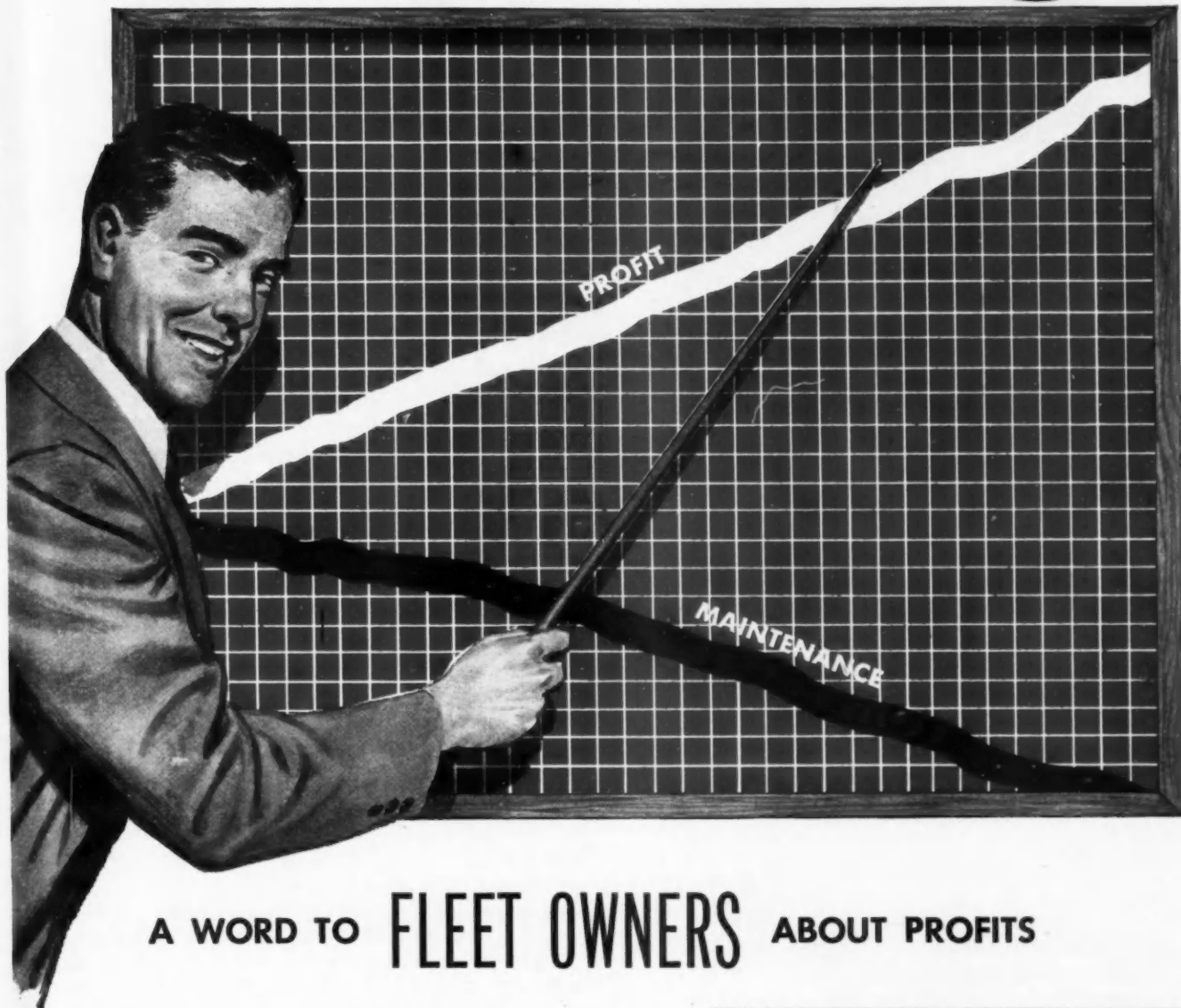
**DELCO BATTERY DEMINERALIZER
PURIFIES TAP WATER INSTANTLY**



Fleet owners in all parts of the country report that Delco's new battery demineralizer is "tailor-made" to fit their needs. It consists of a quart-size plastic bottle with a replaceable filter at the top. To use, the demineralizer is simply filled with any tap water and by squeezing the plastic bottle, chemically pure water is dispensed directly into the battery—saving much time and trouble. The Delco demineralizer is available through United Motors Delco Battery distributors.

**INLITE STOPS 'EM
SAFELY, EVENLY**

The manner in which brake linings stop a speeding vehicle is just as important as the braking power itself. Quick "grabs" that cause sliding wheels can be as dangerous as no brakes at all. To combat this danger, Inlite has engineered its brake linings to fit the specific car on which they are used. This means that whether a vehicle is going 20 mph or 70—it can be stopped evenly and safely with Inlite brakes. There is a matched set of Inlite linings made to fit all cars and popular makes of light trucks.



A WORD TO FLEET OWNERS ABOUT PROFITS

In short, profits are the excess of income over expenditures—and it follows that the greater the reduction in maintenance costs, the more profitable your business will be.

Your United Motors distributor is equipped to help you cut both operating and repair costs. Many lines he handles are the leading brands in the original equipment parts industry. Their quality and dependability have been established over years of trouble-free performance and low-cost operation. Also of great importance is the long experience of your United Motors distributor in efficiently servicing fleet owners.

All of this adds up to lower cost which means greater profits for you. Contact your United Motors distributor today and see the many ways in which he can help you put your business on a more profitable basis.

UNITED MOTORS SERVICE

Division of General Motors Corporation,
General Motors Building, Detroit 2, Michigan



UNITED MOTORS distributes and services the products of these General Motors Divisions

DELCO-REMY DIVISION
Automotive generators
Starting motors
Ignition coils
Voltage and current regulators
Warning signals
Storage batteries

AC SPARK PLUG DIVISION
Speedometers
Gauges

NEW DEPARTURE DIVISION
Automotive and industrial ball bearings

HYATT BEARINGS DIVISION
Automotive and industrial roller bearings

HARRISON RADIATOR DIV.
Auto radiators
Radiator cores
Thermostats
Heater cores
Defroster cores

GUIDE LAMP DIVISION
Lamps
Sealed Beam units
Signal devices

INLAND MANUFACTURING DIV.
Brake linings
Brake hose

DELCO PRODUCTS DIV.
Shock absorbers
Electric motors

SAGINAW STEERING GEAR DIVISION
Automobile jacks

DELCO APPLIANCE DIV.
Automotive electric motors
Appliance motors
Automobile clocks

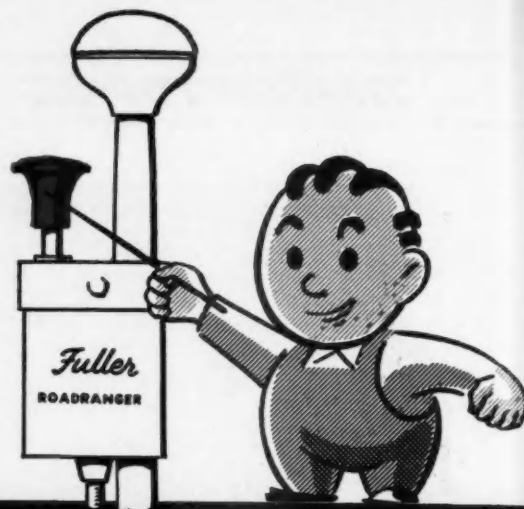
MORaine PRODUCTS DIV.
Brake parts
Brake fluid
Gasoline filters
Engine bearings

ROCHESTER PRODUCTS DIV.
Carburetors
Cigar lighters

PACKARD ELECTRIC DIV.
Electric motors
Automotive cable

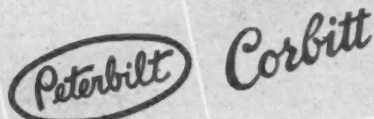
DELCO RADIO DIVISION
Electronic parts

...take your choice



in all of these leading makes
of trucks, you can specify
the 10-speed, one-lever...

FULLER ROADRANGER



Leading fleets have proved the Fuller ROADRANGER in gruelling service... and more and more fleets are specifying this 10-speed, one-lever transmission. Here's why:

1. No gear splitting—10 selective gear ratios, evenly and progressively spaced.
2. Easier, quicker shifts—28% steps—one shift lever controls all 10 forward speeds.
3. Higher average road speed—engine operates in peak hp range with greater fuel economy.
4. Less driver fatigue—i. e. less shifting.
5. Range shifts pre-selected—automatic and synchronized.
6. More compact than other 10-speeds.
7. More cargo on payload axle.

Available in Models R-95-C and R-950-C (overdrive)



10-Speed ROAD RANGER



FULLER MANUFACTURING COMPANY (Transmission Division), KALAMAZOO 13F, MICHIGAN

Unit Drop Forge Division, Milwaukee 1, Wis. • WESTERN DISTRICT OFFICE (SALES & SERVICE—BOTH DIVISIONS), 1060 E. 11th Street, Oakland 6, Calif.

Tachographs

have cut down
driving time by **30%**

says **JERRY F. LEONARD**, GENERAL MANAGER
LEONARD BROS. VAN & STORAGE CO.
DETROIT, MICHIGAN



Leonard Bros.

VAN & STORAGE CO.

Since 1880

Moving • Storage • Packing • Shipping
7040 W. FORT ST. DETROIT 9, MICHIGAN

VINEWOOD 3-1000

Wagner Electric Corp.,
6400 Plymouth Avenue
St. Louis, Missouri

Gentlemen:

We have been using your Sangamo Tachograph on our long-distance furniture vans, which operate over irregular routes throughout the United States, for the past four months.

We have found your recorder advantageous, in many ways. Some of the more outstanding ones are stated below.

They have cut down driving time reported by drivers by thirty percent, based on our comparison of trips operated over similar routes without the use of the Tachograph.

A better check on time consumed in loading and unloading away from the home terminal is afforded.

The Tachograph has allowed us to remove the governors from the trucks, and regulate speed through charts. In that way, we have full power when needed, which adds to the life of the truck.

We feel that this is one of the best improvements that we have added to our equipment in the past few years, and we unhesitatingly recommend their use to all fleet operators.

Yours very truly,

LEONARD BROS. VAN & STORAGE CO.

Jerry F. Leonard

Jerry F. Leonard, General Manager

JFL:acw

AGENT ALLIED VAN LINES, INC.



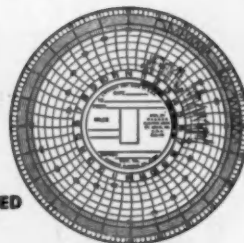
Fleet operators, like Leonard Brothers, report vehicles equipped with TACHOGRAPH substantially reduce driving time.

At the start of each run a wax coated chart is placed in the TACHOGRAPH. On this chart is accurately recorded the actual driving time, loading and unloading time, and distances traveled... information needed to assure profitable payloads and efficient operation.

You gain all these advantages when you have your fleet equipped with TACHOGRAPH. In addition, TACHOGRAPHS help guard against accidents, reduce costly shop time, and lower insurance rates. Instruments are available in two types, M.P.H. and R.P.M. Get full details on TACHOGRAPH in Wagner Bulletin SU-3C. Mail coupon below for your free copy, today.

CHART TELLS ALL

- WHEN ENGINE STARTED
- HOW FAST IT TRAVELED
- HOW LONG ENGINE IDLED
- WHEN VEHICLE WAS IN MOTION
- WHEN VEHICLE STOPPED
- DISTANCE TRAVELED BETWEEN STOPS



Wagner Electric Corporation

6476 PLYMOUTH AVE., ST. LOUIS 14, MO.

Please send a copy of Bulletin SU-3.

Name and Position _____

Company _____

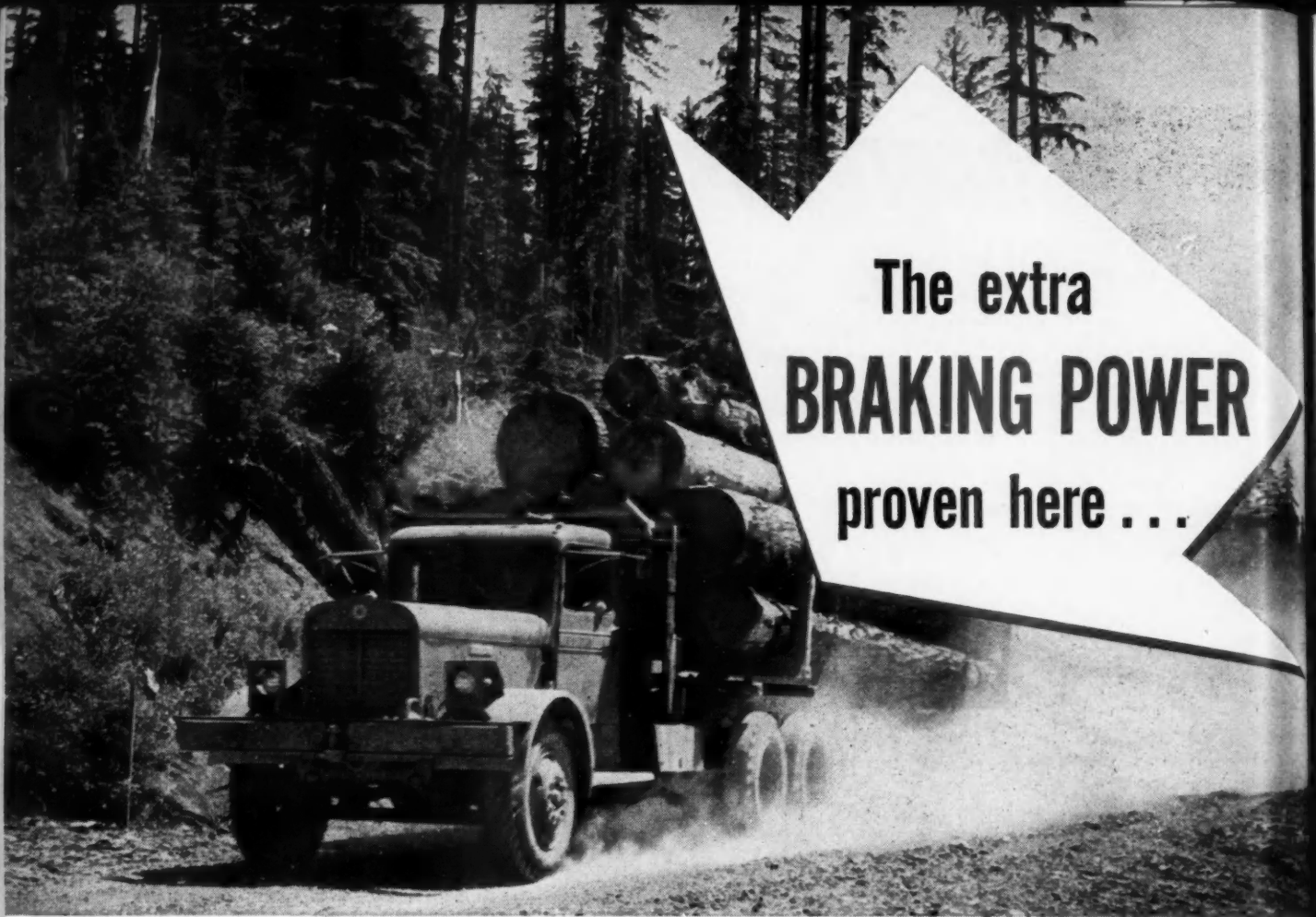
Address _____

City _____ State _____

We operate _____ Vehicles
(NUMBER)

DISTRIBUTED BY
Wagner
Electric Corporation

833-8



Logging in Oregon's Cascade Mountains

The extra
BRAKING POWER
proven here . . .

means
EXTRA SAFETY
on any
hauling job!

**Mighty Bendix-Westinghouse Air Brakes Provide
Perfect Control on Toughest Logging Hauls!**

Take a 275-horsepower, 15-ton logging tractor and trailer rig . . . pile on more than 70 tons of giant timbers . . . add mile after mile of treacherous 20% mountain grades and you've got a good picture of a job where only the very **best brakes** are good enough. And in the logging industry that means only one thing—Bendix-Westinghouse Air Brakes. That's because these mighty brakes, built by the industry's most experienced manufacturer, pay off with the **extra stopping power and performance** that assure the safest, surest, most dependable braking action and longest service life in the business. And these are factors that help **cut costs, step up efficiency** on any hauling job—from the roughest to the most routine. That's why, no matter what type truck you operate, you can depend on the utmost in **safety, dependability and savings** by specifying Bendix-Westinghouse—the world's most tried and trusted air brakes.

Bendix-Westinghouse



THE WORLD'S MOST TRIED AND TRUSTED

AIR BRAKES

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY • ELYRIA, OHIO • BERKELEY, CALIF.



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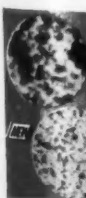


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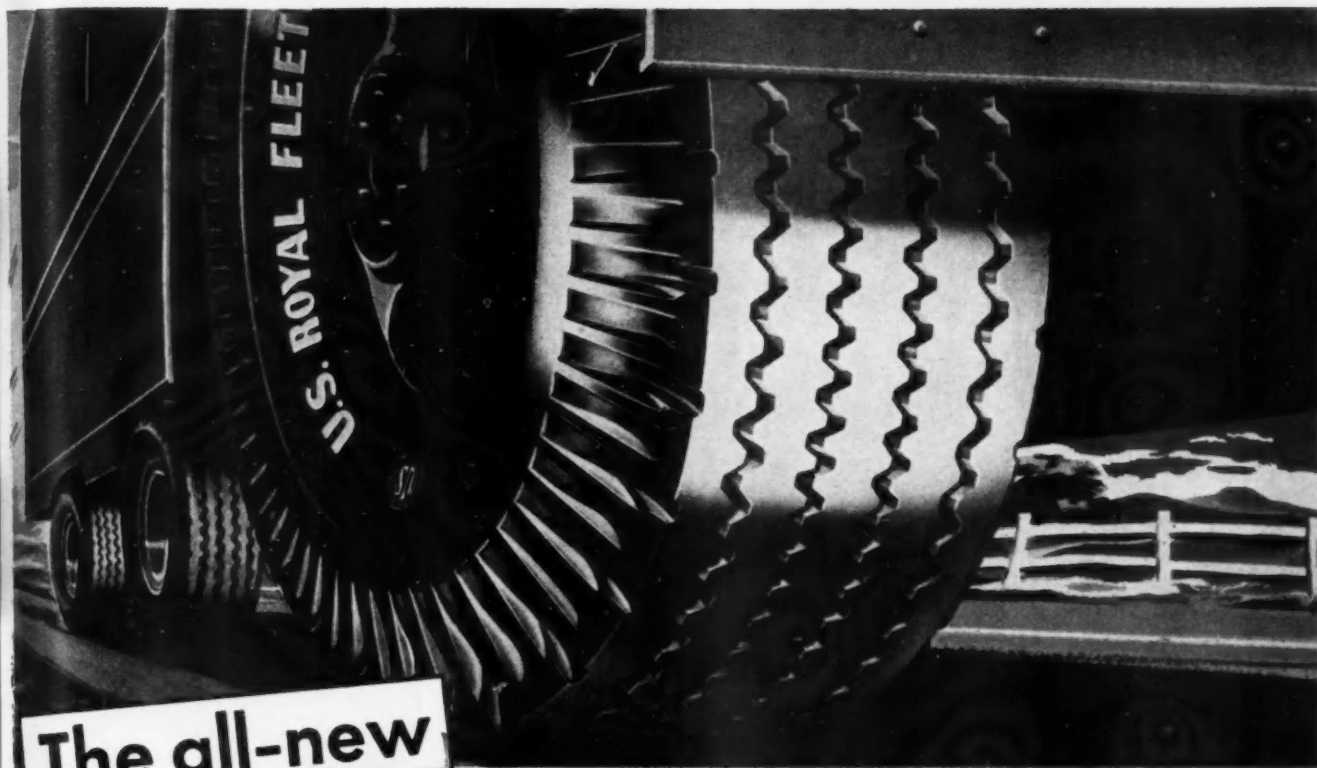
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COMMERCIAL

Up to 41% Greater Mileage At Standard-Level Prices!



The all-new

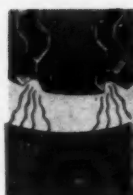
U.S. ROYAL FLEETWAY

**Exclusive Patented Processes and Equipment,
nowhere else available, make possible this
Sensational New Truck Tire!**



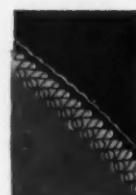
**MICRO-MIXED
TREAD COMPOUND**

*DELIVERS MORE MILEAGE
ON ORIGINAL TREAD!*



**INFRA-RED
GROOVE CONDITIONING**

*STOPS GROOVE CRACKING
AND CUT GROWTH!*

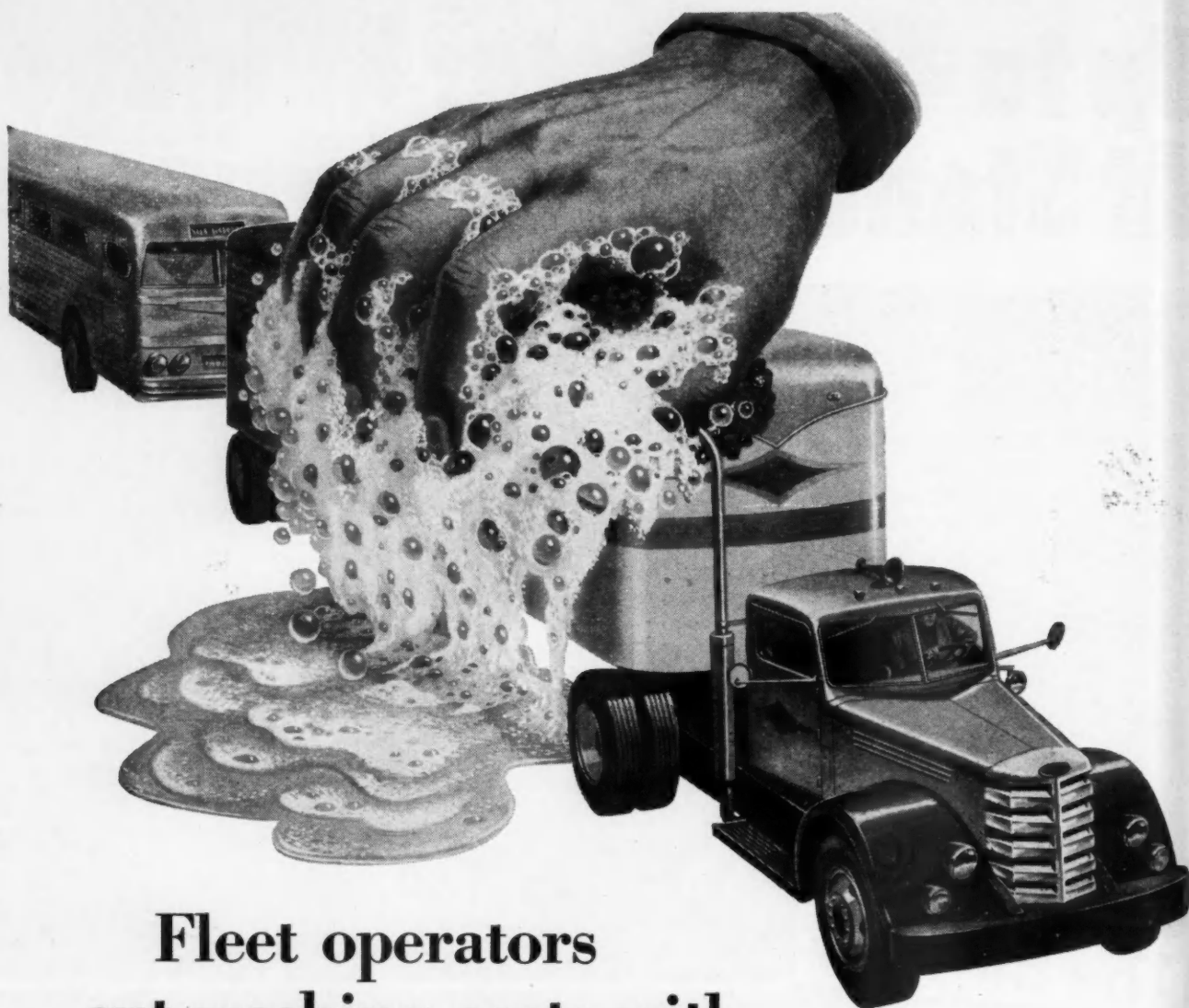


**SUPER-ADHESIVE
CORD TREATMENT**

*STRENGTHENS CARCASS
FOR EXTRA RECAPS!*

UNITED STATES RUBBER COMPANY

COMMERCIAL CAR JOURNAL, August, 1953



Fleet operators cut washing costs with economical D-40

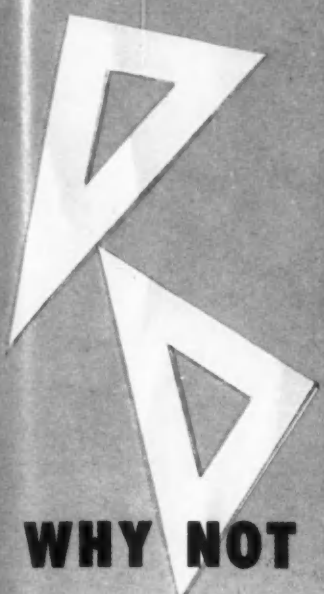
- Use D-40 as is—no compounding
- Fast, efficient—cleans quickly
- Eliminates wiping—just rinse off
- Safe, neutral, non-toxic. Can't harm paint
- For machine or manual washing



Detergent D-40 will give you fast, thorough washing at a lower cost. This granular detergent dissolves instantly, quickly removing dirt and film. It needs no compounding—just add a small quantity to water and wash. D-40 is available in 85# bags, easy to handle or store. It is made by the world's largest producer of synthetic detergent raw materials—your assurance of a stable, economical source of supply.

For information, samples and technical help, call the Oronite office nearest you.

ORONITE CHEMICAL COMPANY
 38 SANSOME STREET, SAN FRANCISCO 4, CALIFORNIA
 30 ROCKEFELLER PLAZA, NEW YORK 20, NEW YORK
 STANDARD OIL BLDG., LOS ANGELES 15, CALIFORNIA
 600 S. MICHIGAN AVENUE, CHICAGO 5, ILLINOIS
 MERCANTILE SECURITIES BUILDING, DALLAS 1, TEXAS



WHY NOT LET



WANT to add payload? Save chassis weight? Cut truck operating costs?

Of course you do!

And you can—if you see your White Representative!

He has all the engineering facts of correct truck application for *your* business. He has the know-how in the White Payload Procurement Plan.

And he has the greatest, best-engineered line of White Trucks and Highway Tractors in history to back up his analysis of *your* needs.

It's a perfect "payload" combination—the *right* truck, tailored to *your* work.

White Payload Design GO TO WORK FOR YOU?

Check These White Payload Design Features

THIS Esso Standard Oil Company, Virginia Division, White Tractor is a WC-24PLT model engineered *right*... by White! New Bridge Formula front end provides 28-inch dimension from front of bumper to center of the front axle... 102 inches to back of cab, permitting 35-ft. trailer within 45-ft. limit.

Forward-mounted safety tanks improve driving axle payload capacity.

The Mighty Mustang adds power... saves weight. Right for the hills and the big payloads!

Favorable chassis weight because of payload design weight-saving features.

THE WHITE MOTOR COMPANY • Cleveland 1, Ohio

For More Than 50 Years the Greatest Name in Trucks




USER TESTS PROVE THAT ALL NEW-~~HOOD~~ MILE KING *Extra Tread Tire* CUTS COSTS



HOOD'S great new Mile King Truck Tire has undergone two years of exhaustive tests . . . on Hood's test fleets and on *customer* fleets. Results have been sensational. The Mile King has delivered more original mileage than other brands of extra tread tires tested and more recaps, too! G. D. Sauls, a large Atlanta fleet operator, *averaged 110,000 miles before recapping*. Read what he says below. Ask your Hood dealer to show you this new tire **NOW**.

*All nylon or rayon...New kind of tread...
New construction principle...More rubber*

G. D. SAULS Truck Leasing
867 Sylvan Place, S. W.
ATLANTA, GEORGIA
ATWOOD 5922 MAYWOOD 9814 ATWOOD 5761



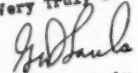
Mr. Max Block, Mgr.
Prior Tire Market Station, Inc.
1195 Sylvan Road S. W.
Atlanta, Georgia

Dear Max:

As you will remember when you first called on me I was faced with a problem of terrific tire costs. My solution seemed far from in hand for I had used the products of practically all the other manufacturers with no beneficial results. As a matter of fact, I listened to your sales presentation with a great deal of skepticism and could not believe the Mile King would perform as you outlined it.

However, we decided to try four of them. The average for those four tires was 110,000 miles before recapping.

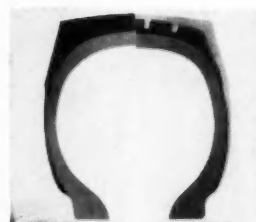
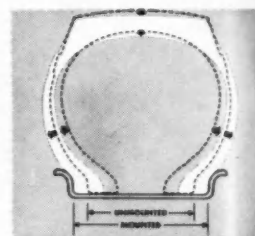
Because of this, we bought 60 more Mile Kings for our equipment. Today I have spent some time in the review of my tire mileage and costs and am glad to inform you that these 60 tires are giving us the same high mileage as the original four.

Very Truly Yours,

G. D. Sauls



Revolutionary tread has lateral bars close enough together to provide long, even wear but far enough apart for better traction and exceptional cooling. Flat contour increases traction, gives more miles on traction wheels where the wear is most severe. 45° angle offsets in center of the tread give positive protection against side-slip . . . reduce side scuffing. Crack and cut growth is eliminated.

Beads are molded closer together than conventional tires. When tire is inflated, air forces beads to full rim width. This flattens the profile and compresses the tread. Tread rubber under compression is more resistant to abrasion. Flatter profile means more rubber on the road; better load distribution; slower more even wear.



Tread is approximately 23% thicker than average conventional tires. This means extra mileage at less cost per mile. Tread is specially compounded to resist wear and run cool. Open shoulders and well-ventilated tread allows tire to run at sustained high speeds under heavy loads. Possibility of ply and tread separation is virtually eliminated.

Hood Rubber Company, Akron, Ohio
A Division of The B. F. Goodrich Company
We'd like to talk to our nearest Hood dealer about the Mile King. Please send us his name and address.

Name _____
Company _____
Street _____
City _____ Zone _____ State _____ CH-8

Available in All Nylon or Rayon Construction



A 40 sec. chemical analysis makes bearing steel better

(Another reason why TIMKEN® bearings are first choice with truck manufacturers)

THIS direct reading spectrometer, at the Timken Company's steel mill, tells the exact chemical composition of a melt of bearing steel in just 40 seconds.

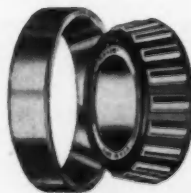
The Timken Company could have "gotten by" without this extremely expensive scientific machine. But this costlier method gives safer, surer quality control than older, slower methods. It helps keep the Timken® steel used in Timken bearings the finest made anywhere.

Only with Timken bearings do you get all the advantages of 1) advanced design, 2) precision manufacture, 3) rigid quality control, 4) special analysis Timken steels.

These are the reasons why Timken bearings are first choice with truck manufacturers—and why it's wise for you to specify Timken bearings on your replacement orders. Send now for your free copy of "Timken Tapered Roller Bearings—Their Care and Maintenance". Write Dept. JCC8, The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

SINCE THEY'RE BEST WHEN THE TRUCK IS NEW, THEY'RE BEST FOR REPLACEMENT, TOO!

TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS



NOT JUST A BALL  NOT JUST A ROLLER  THE TIMKEN TAPERED ROLLER  BEARING TAKES RADIAL  AND THRUST  LOADS OR ANY COMBINATION 

COMMERCIAL CAR JOURNAL, August, 1953

PERMATEX FORM-A-GASKET "SE"

PRIZE WINNING



**Bet there's at least one here
that's new to you!**

These are just a few of the hundreds of ideas that won five dollars in the big FORM-A-GASKET Service Suggestion Contest — some of them even surprised us. Read through them. We'll bet you'll find at least one *time-saving*, money-making use of FORM-A-GASKET that you hadn't run into before.



Saves Rear Axle Studs!

Max Loeffler, Capital Trash Co., Washington, D.C.: "We operate a fleet of 50 trucks and have had a good deal of trouble with rear axle studs. Since we put Permatex Form-A-Gasket #1 on the studs we have never had a come-back for breakage or loosening. This has saved us purchasing studs, manpower and tie-up of trucks."



Checks Oil Leakage!

J. F. Mooney, Empire State Ignition Corp., Bronx, N. Y.: "After more than one complaint of clutch chatter due to oil leaking into the clutch housing and onto the disc, we discovered that the main source of leakage was the flywheel mounting bolts. A small amount of Form-A-Gasket #2 in each bolt hole corrected this complaint and entirely eliminated such comebacks."



Seals Carburetor Assembly!

Joseph J. DiMaggio, Sr., U.S. Post Office Motor Vehicle Service, Baltimore, Md.: "A car I was working on, when accelerated, would spurt gasoline out of the top gasket. I installed a new gasket, but it did not correct the trouble, so I took the old gasket and coated it on both sides with Permatex Form-A-Gasket #1, let it set for a couple of minutes and re-assembled. It corrected the trouble completely, saving the owner the price of another carburetor."

Seals Shop-Made Gaskets

R. J. Selthaler, Ray's Tractor Repair, Portland, Oregon: "We make our own gaskets for the 48 types of garden tractors and lawnmowers we service, instead of trying to maintain complete gasket stocks. A coating of Form-A-Gasket assures a perfect gasket seal every time. Form-A-Gasket is ideal for the very high temperatures generated by some of these tractors."



Save Work On Timing Chain Job!

E. E. Humphrey, W. E. Humphrey & Son, Clinton, Ind.: "When I do a timing chain job on a car that requires the pan to be dropped only a fraction of an inch, not removed, I use Permatex Form-A-Gasket #1 to seal the oil pan gasket when it tears. This stops any oil leaks."



Extends Water Jacket Life!

Vernon D. Linton, Gladding Bros., Pocomore, Md.: "When working with outboard motors, I find that if you coat the water jacket with Aviation Form-A-Gasket #3 when it's new, clean it after use and paint it with Form-A-Gasket #3 again, it will increase the life of the water jacket a great deal."

Seals Power Lawnmower Gaskets!

E. J. Wright, Gibson Service and Repair, Lincoln, Neb.: "We use Aviation Form-A-Gasket #3 on all gaskets when we repair 2 and 4-cycle power lawnmower and outboard motors. It forms a perfect seal and is waterproof and leakproof."



PERMATEX COMPANY, INC., Brooklyn 35, N. Y.

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KET "SERVICE SUGGESTION" CONTEST

G IDEAS



Quiets Fan Belts!

Irving Sechter, Bay Service Station, Brooklyn, N. Y.: "When I get a slippery fan belt or one that's making a lot of noise, I coat it with Aviation Form-A-Gasket #3. It makes a wonderful belt dressing."

Holds Budd Wheels!

Joseph L. Hourihan, Moulton & Holmes Transportation Co., Boston, Mass.: "When changing tires, removing Budd wheels from trucks always was a problem and I often had to burn the nuts off or the studs would break, making removal of the drum and hub necessary. For the past two years prior to assembly, I have been coating both male and female threads of the inner and outer studs and nuts with Permatex Aviation Form-A-Gasket #3 and have eliminated this trouble."



Leakproofs Automatic Transmissions!

Daniel J. Strega, Motherwell Motors, Chicago, Ill.: "I am an automatic transmission man. I find that by applying Permatex Aviation Form-A-Gasket #3 to both sides of the torque converter gasket, I can prevent oil leaks at this point. Prior to my use of #3 I had many 'come-backs' because of leaks at this point."

Waterproofs Signal Lights!

Charles Clifton, Dom-Mor Garage, Brooklyn, N. Y.: "I find that Permatex Form-A-Gasket #1 is perfect for sealing marker and signal lights after they are cut into metal truck panels. It really keeps them water and weather-tight. Incidentally, the same trick works well on 'through the roof' home tv antenna installations."

Waterproofs Flashlights!

E. H. Feck, Forest View Farm, Elyria, Ohio: "I often take a flashlight out at night when checking for trouble in the wet soggy places where we use farm machinery. I have dropped the flashlight into water more than once, but do not have a shorted-out flashlight any more since I started using Permatex Aviation Form-A-Gasket #3 on the caps at both ends."



The Service Suggestion Contest is still on! Your idea may win five dollars! Ideas must be on the official suggestion form. Get yours from your jobber or Permatex representative. Send in as many ideas as you want to.

3 TYPES OF FORM-A-GASKET for every service application

No. 1

Sets Quickly
Dries Hard

No. 2

Sets Slowly
Is Non-Hardening

No. 3 (AVIATION)

A brushable liquid
that sets to a paste.



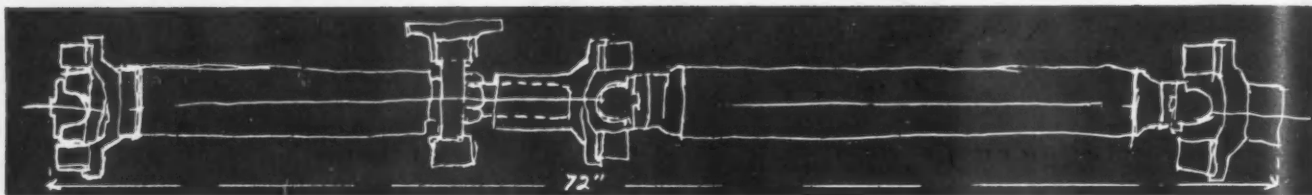
Use all 3 in your shop!

35, N. Y. Over 50 Chemical Products for Better Automotive Maintenance

August, 1953 COMMERCIAL CAR JOURNAL, August, 1953

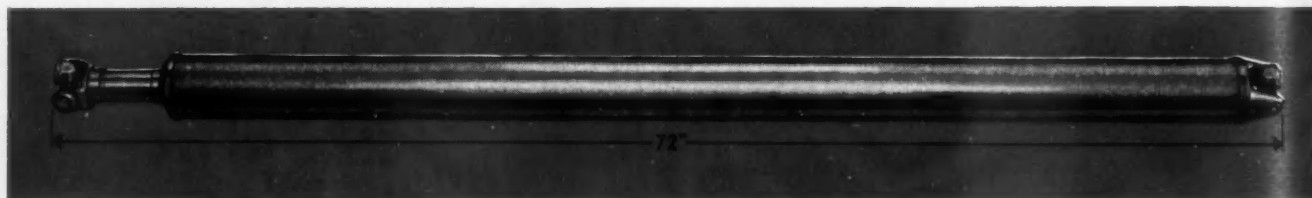
You CAN Maintain BALANCE in a LONG Truck Propeller SHAFT

If there is a reason why your truck should not have a *mid-ship bearing*, to support an extra long drive line, like this —



You can eliminate the mid-ship bearing — and one universal joint — by using MECHANICS Roller Bearing UNI-

VERSAL JOINTS and a specially balanced, extra long PROPELLER SHAFT like this —



MECHANICS engineers constantly are solving joint and propeller shaft problems. Let them contribute their extensive experience toward making your truck or heavy duty equipment drive lines more effective.

MECHANICS UNIVERSAL JOINT DIVISION

Borg-Warner • 2034 Harrison Avenue, Rockford, Illinois

MECHANICS

Roller Bearing 

UNIVERSAL JOINTS

For Cars • Trucks • Tractors • Farm Implements • Road Machinery •
Aircraft • Tanks • Busses and Industrial Equipment

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COMMERCIAL

Before you buy any truck... Make the
15-second SIT DOWN TEST
in **FORD'S** new Driverized Cab



Step into
the world's most comfortable truck cab!
It's new! It's DRIVERIZED! Only FORD has it!

It's a truck driver's dream come true! You'll know it too, in just the 15 seconds it takes you to . . .
swing open the new wider doors...
slide into the 3-man comfort seat with exclusive shock-snubber . . .
sweep your eyes across the one-piece windshield and back to the 4 ft. wide rear window . . .
stretch out in big cab roominess...
sigh a sigh of solid comfort. Man! What a treat for a working guy!

The completely new Ford Trucks offer many great advancements in easier driving and time-saving delivery, all at the same low price.

They offer new power for sustained speed travel—new Synchro-Silent transmissions for faster, easier shifting—new set-back front axles for sharper turning—new features throughout to help *get jobs done fast.*

Choose the one right truck for your work from over 190 completely new Ford Truck models.

And before you buy any truck, make the *15-second Sit Down Test*. It will open your eyes to comfort you never thought possible in a truck. See your Ford Dealer today!

FORD ECONOMY TRUCKS
SAVE TIME! SAVE MONEY! LAST LONGER!



They're on the right track! Mr. G. G. McAfee (left), official of Winston Brothers Company, and Mr. Tom Gearhart, Standard's Automotive Engineer, have worked closely together to secure effective lubrication of equipment used on the vast Rocky Mountain construction job described below. This sort of teamwork has helped make "molehills" out of mountainous lubrication jobs.

They made "MOLEHILLS OUT OF MOUNTAINS!"

To bring water from the Colorado River to the eastern plains of Colorado, men and machines have driven a 13-mile tunnel through the Rockies, hacked out vast reservoirs, and built great dams of earth and rock fill. They have literally made "molehills out of mountains!"

Winston Brothers Company, Constructors and Engineers, of Minneapolis, has played a major role in this vast construction project. Under the most adverse conditions, the Winston team of men and machines has accomplished the toughest of earth-moving jobs . . . on schedule! Important to the successful operation of Winston Brothers' wide array of gasoline and diesel powered equipment has been Standard Oil's fleet lubrication service and the performance of STANOLUBE HD-M Motor Oil.

Despite continuous operation of equipment, severe overloads, high engine speeds, and exposure to dust, sand, and water; STANOLUBE HD-M has kept engines clean and protected against wear. A minimum of maintenance has helped Winston Brothers keep equipment working on a basis of two 8-hour shifts, 6 days a week.

Standard's fleet lubrication service has accomplished the imposing job of supplying the right

lubricants for the right jobs right on schedule. A Standard Oil Automotive Engineer has worked closely with Winston Brothers on all phases of lubrication. One of his big jobs has been that of coping with varying seasonal and operational needs to make sure that proper grades and types of lubricants have been available and have been applied at the right time. Despite adverse conditions of location and weather, lubricants have been delivered on schedule.

The fleet lubrication service and the heavy-duty motor oil that helped Winston Brothers make "molehills out of mountains" can help you make important savings. You can reach a Standard Oil Automotive Engineer by phoning your local Standard Oil office. Or write: Standard Oil Company, 910 South Michigan Avenue, Chicago 80, Illinois.

STANOLUBE HD-M

REG. U. S. PAT. OFF.

Motor Oil

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STANDARD OIL COMPANY *(Indiana)*

If you earn

GMC 400-27 • 18,000 GVW-30,000 GCW

130 hp "270" engine, 7.5 to 1 compression, with Moraine M-400 crankshaft AND connecting rod bearings. Two-speed

electric-shift rear axle, 15,000 pounds capacity, giving 8 forward speeds—standard equipment.

Built to outhaul any truck up to 19,500 GVW, yet underprices its class by a wide margin!

GMC 450-30 • 19,500 GVW-35,000 GCW

145 hp "302" engine. 15,000-pound capacity hypoid rear axle. 5,000-pound capacity front axle. 5-speed transmission.

Hydro-vac or air actuated hydraulic brakes. 2-speed electric-shift rear axle optional.

Features the most powerful truck engine for its size ever built. Weighs up to 500 pounds less, yet hauls up to 1285 pounds more payload than competitive jobs.

GMC 470-30 • 21,000 GVW-45,000 GCW

Also with the famous "302" engine. Spiral bevel single reduction rear axle, 17,000-pounds capacity. 5-speed transmission.

Full air brakes. 2-speed electric-shift rear axle optional.

Hauls more payload pounds within the 45,000-pound limit than any other truck built!

All three Series in 5 wheelbases with conventional cab. In cab-over-

engine design, 5 wheelbases in the 450-30; 3 wheelbases in the 470-30.

rmoney by the ton-

**—you can make it faster with GMC's new 400 Series
that lead the middleweight highway haulers**

DO your profits hinge on the maximum tonnage you can haul—at the lowest possible cost—in the shortest possible time?

Then carefully study the specifications of GMC's three great new middleweights, shown here.

Note that each one is powered to

pack more payload—designed to operate more economically—built to last more years.

And each is priced to make it the supreme value in its class.

You'll find it worth your while to see your GMC dealer—*now*.

GMC Truck & Coach Division of General Motors



Your key to greater hauling profits

"Remember, Joe—
we want cable
that can take it!"



REDUCE OPERATING COSTS

More and more, fleet owners are finding that it pays to replace with Packard, the cable that is preferred by automotive engineers. They find that because Packard cable has exceptional resistance to heat, oil, chemicals and abrasion it yields more *miles per replacement*. And more *miles per replacement* is the best answer to lower operating costs. See your Packard jobber... equip all your vehicles with Packard.



PACKARD BATTERY CABLE—Packard battery cables are used as original equipment on more cars, trucks, buses and tractors than cables of any other make. Packard battery cables are full size, full weight... are available with LEADALLOY terminals or leaded brass terminals. Both types are packaged in individual cartons—both deliver top performance—both have acceptance everywhere.

PACKARD standard high-tension more cars other cables LAC-KARD balanced dependab

FOREMOST BUILDER OF AUTOMOTIVE WIRING

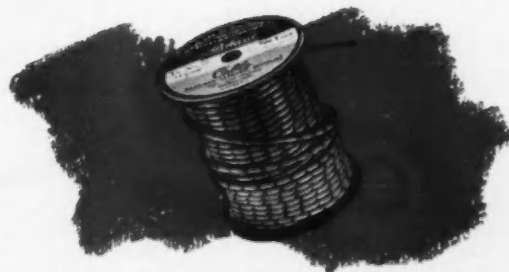
"Okay—then from
now on we use only
PACKARD cable!"



ATING COSTS WITH THE "BIG 3" IN THE CABLE FIELD



PACKARD IGNITION CABLE—Long considered the standard of the automotive industry, Packard high-tension cable is original equipment on more cars, trucks, buses and tractors than any other cable. Packard **FOUR-FORTY** and Packard **LAC-KARD** ignition cables are designed to deliver balanced performance in every application. For dependability on the job, choose Packard!



PACKARD LOW-TENSION CABLE—As with Packard's two other products, Packard low-tension cable is used as original equipment on more cars, trucks, buses and tractors than cable of any other make. Packard's **249 COMPOUND** insulation, by every laboratory test and by the test of long, hard usage in the field, has exceptional resistance to heat, oil, chemicals and abrasion.

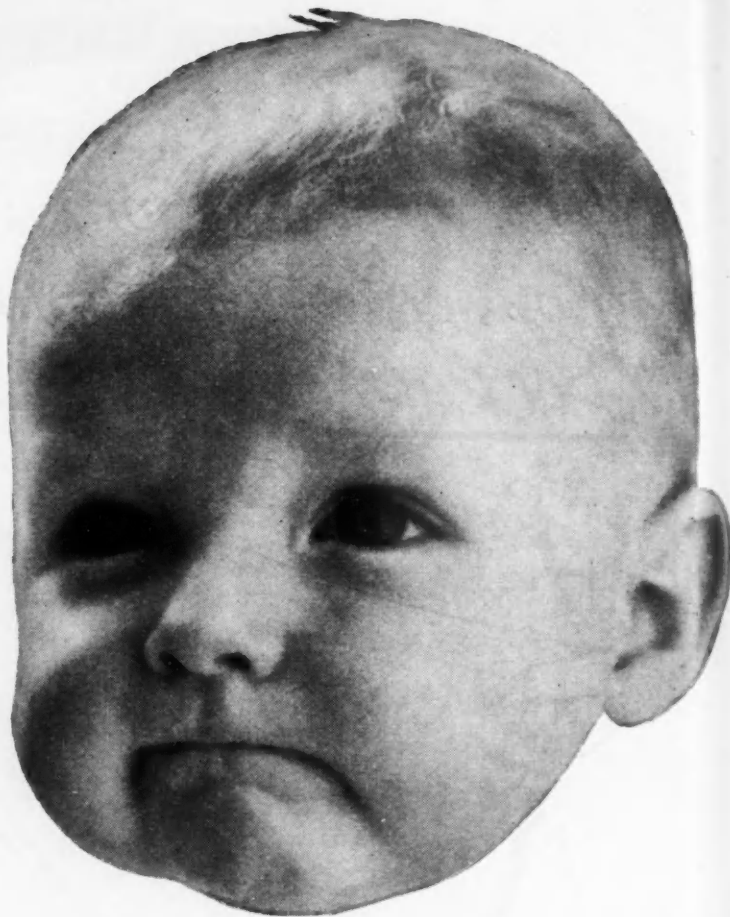
Packard
REG. U.S. PAT. OFF.
TRADE MARK

Packard Electric Division, General Motors Corporation, Warren, Ohio

A GENERAL MOTORS PRODUCT  A UNITED MOTORS LINE

AVAILABLE THROUGH DISTRIBUTORS EVERYWHERE

*"My daddy's a
fleet operator, see?"*



"... and he says that Permitte Replacement Parts are the *best* to use in all makes of cars, trucks and buses.

"Don'cha see why? Permitte Replacement Parts last longer and perform better; so Daddy's cars and trucks keep rolling and stay out of the repair shop longer.

"What's more, Daddy tells me, that these Permitte Replacement Parts always fit right, are easy to install, and get repair jobs done in a hurry.

"If you are a fleet operator and don't use Permitte Parts, better get with it, Buster! They'll put money in your pocket".



ALUMINUM INDUSTRIES, Inc. • CINCINNATI 25, OHIO

PERMITE Replacement Parts

PISTONS • PISTON PINS • VALVES • VALVE GUIDES • VALVE STEM KEYS • VALVE SPRINGS
WATER PUMPS • WATER PUMP PARTS • CYLINDER SLEEVES AND ASSEMBLIES • TIE-ROD ENDS
SPRING SHACKLES • KING BOLT SETS • BUSHINGS • MUFFLERS AND CLAMPS • TAIL PIPES

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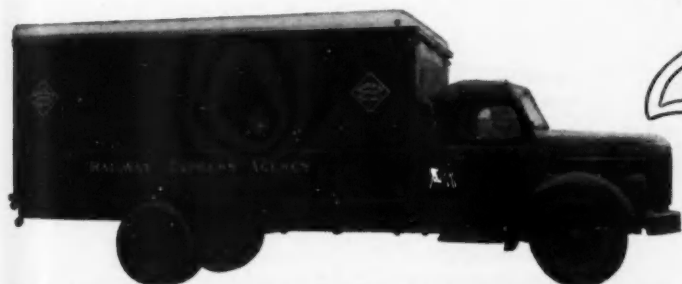
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YOU get all THREE with YORK-HOOVER TRUCK BODIES

*Quality, Performance, and
Cost-Saving Efficiency*

QUALITY . . . because part-by-part, York-Hoover Truck Bodies are fabricated from top quality materials by expert craftsmen. This means that when you buy York-Hoover Bodies you not only get a quality product at a fair price but a product that gives top performance besides.



PERFORMANCE . . . because each York-Hoover Body is specifically engineered for the job to be done. This, together with the factors of stability, minimum weight, ease of maintenance, and the ability to "take it" in everyday service, makes York-Hoover Truck Bodies the best buy for you.



COST-SAVING EFFICIENCY . . . is the end result . . . the reason why for over 60 years customers from coast to coast have relied on York-Hoover Truck Bodies to give them top performance, low operating and maintenance costs. Enjoy all 3 in '53. Buy York-Hoover Truck Bodies!



York - Hoover

YORK, PENNSYLVANIA

Corporation

Body Division



WALKER "PRECISION

THE

HERE'S HOW WALKER "PRECISION TUNING" SOLVES THE BACK PRESSURE PROBLEM

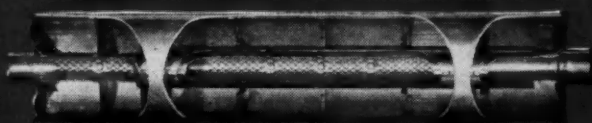
Because an increase in volumetric efficiency brings out a comparable increase in the volume and the velocity of the exhaust gas, proper back pressure is of vital importance to the performance of these new engines.

WALKER PRECISION TUNING

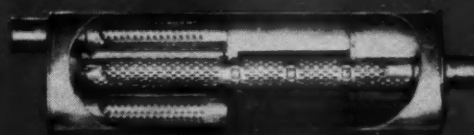
permits increases in volumetric efficiency (horsepower) without increasing the noise level

WALKER PRECISION TUNING

controls the more intense noise levels of these new higher efficiency engines without destroying power

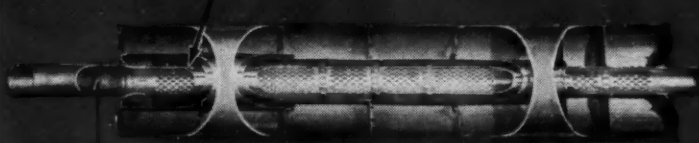


Special "Double Shell Tuning" was required in new "Precision Tuned" model to reduce sound level of higher horsepower engine without loss of performance from increased back pressure

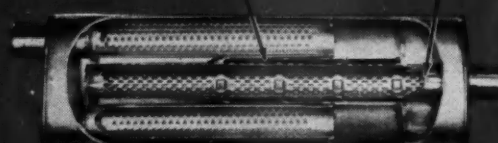


Additional Roughness Control Chamber required

Increased Tube Size over previous model lowers back pressure



Note Welded Exhaust Pipe



Longer Tri-Flow Unit controls sound level

All Silencers have Asbestos and Cover to control Shell Noise

NOW MORE THAN EVER

WALKER SILENCERS

MAKE THE DIFFERENCE!

Walker
Part of
a Vital

In this
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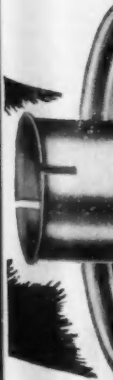
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WALKER



COMMERCIAL

ON **TUNING" BRINGS OUT**

GO FACTOR *

Walker "Precision Tuned" Silencers are a Basic Part of the Modern Engine's "Breathing System" a Vital Influence in the Improved "GO-FACTOR"

In this new generation of engines, the most direct and practical route to the *improved* GO-FACTOR lies through *increased volumetric efficiency* . . . or the improved ability of the engine to breathe . . . to effectively utilize a greater charge or volume of air-fuel mixture and transform it into increased horsepower.

As a basic part of the engine's breathing system, proper exhaust system design exerts a vital influence on car performance . . . on its final horsepower rating . . . on its GO-FACTOR. No longer can yesterday's mufflers meet even the minimum requirements of these new standards.

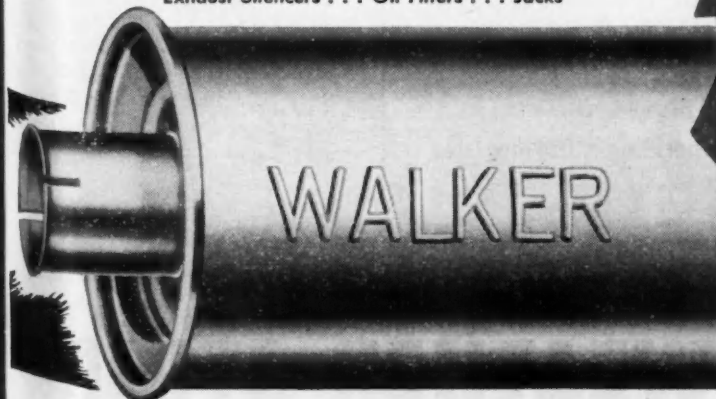
And once again Walker sets the pace with "Precision Tuning" . . . a new generation of Walker Silencers to meet the new and more complex problems of a new generation of engines.

Walker "Precision Tuned" Silencers are designed as an integral part of engine design . . . to quiet the heavier power notes of these new, more powerful engines without power loss . . . to specifically solve the new and difficult problems of shell noise . . . "transmission boom" . . . "tail pipe bark" . . . and still preserve the full measure of "traffic flash" and reserve power designed into every modern automobile.

Yes—Walker "Precision Tuned" Silencers bring out the "GO-FACTOR"!

WALKER MANUFACTURING COMPANY OF WIS. • RACINE, WISCONSIN

Exhaust Silencers . . . Oil Filters . . . Jacks



***GO-FACTOR**

means the ability of the car to get into quick motion



"PRECISION TUNED"

for the new generation of engines and automobiles—now and to come

"INDIVIDUALLY TUNED"

for the millions of fine cars, trucks and buses still in active service



Sightseers get
all of the view...

but **none** of the weather!

Sight-seers in this Sight-Seeing Coach see as much as folks who rode atop the classic tallyho! But what a difference! Those earlier riders were drenched to the skin by the shortest summer showers. But today's travelers, enjoying the scenery, ride out the worst storms in perfectly dry comfort. All *this* . . . because the top is composed largely of curved picture windows, each protected completely and permanently by the *one perfect seal* . . . Inland Self-Sealing Weather Strip! It *never* leaks . . . NEVER!

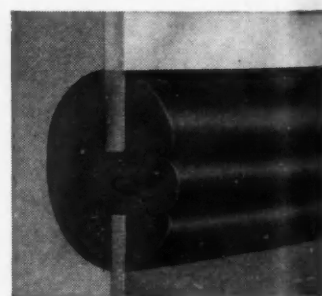
That's why so many cars, buses and trucks, other vehicles and structures, use Inland Strip on windshields and fixed windows. It's the basic Inland *principle* that does it . . . the natural resilience of rubber, permanently compressed . . . a seal that locks itself for keeps, without cement or binders.

Inland Strip is *best* for the builder . . . a fast, one-man, low-cost installation. And *best* for the user . . . long-lived, trouble-free, inexpensive when replacing broken glass.

INLAND MANUFACTURING DIVISION • General Motors Corporation • Dayton, Ohio



Self-Sealing
WEATHER STRIP



*Here's how
it works!*

Inland Strip goes into body panel or other opening . . . glass into Strip . . . filler strip into locking channel. A *compression seal* that's complete and permanent!

A NAME THAT HAS MEANING IN THE TRUCKING INDUSTRY

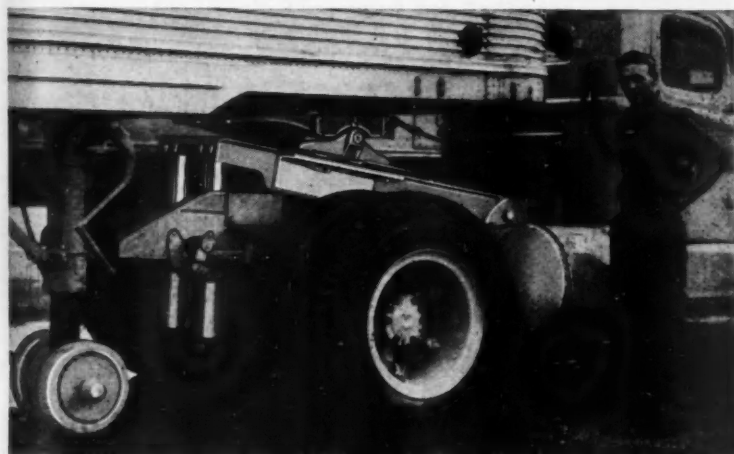
CEMCO



CEMCO HYDRAULIC TAILGATE

Wherever trucks are loaded and unloaded there's work for a CEMCO Tailgate. That 30" to 54" between truck and ground is a cinch for a CEMCO—even with 2,000 pounds on its back. Many operators have found that with a CEMCO Tailgate one man can do the work which formerly required two men—one answer to the manpower shortage.

Comes complete with mounting accessories and mounts readily on most any truck or trailer. This Cemco unit, weighing only 700 pounds, can withstand terrific punishment. Let us tell you more about it!

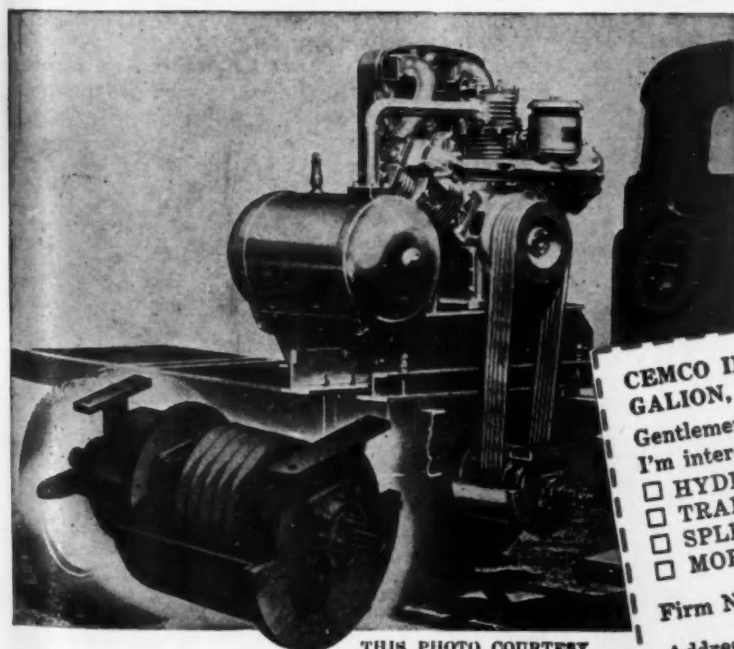


CEMCO TRAILER JOCKEY

For spotting trailers quickly you can't beat a CEMCO Trailer Jockey. Truckers from coast to coast are singing its praises. *Lee Way Motor Freight (Okla. City)*, writes . . . "We think it a good investment for any company handling as many as 50 trailers a day around the terminal." . . . *Standard Oil Co. (Cleveland)*, "We have purchased a CEMCO Trailer Jockey and it is working very satisfactorily."

Holisting the trailer is a matter of seconds—no landing gear to crank—all controls (including king-pin release) in the cab. It fits nearly every 34" to 37" tractor frame, has a lifting height of 11" and has an upward thrust of 37,500# at center-line of fifth wheel, making it easy to lift a 55,000# gross load. Cut-off valve prevents overload. Complete with PTO.

Saves time of dock crew, too. Use handy coupon below to get complete story! Let us give you names of users near you.



SPLIT-SHAFT POWER TAKE-OFF

Illustration at left shows power being delivered to a Jaeger "Travel-Air" Compressor via a CEMCO Split-Shaft Power Take-Off. It delivers full power of truck motor yet doesn't interfere with transmission of power to rear wheels.

A CEMCO on your truck means you can take power to the job wherever your truck can travel. Installation is not complicated—maintenance is little more than occasional lubrication. Use coupon below to get more details promptly.

CEMCO INDUSTRIES, INC.
GALION, OHIO

Gentlemen:

I'm interested. Please send me more information on your

- ☐ HYDRAUL-LIFT TAILGATE
- ☐ TRAILER JOCKEY
- ☐ SPLIT-SHAFT POWER TAKE-OFF
- ☐ MOBILE MACHINE SHOP

Firm Name

Address

Attention

THIS PHOTO COURTESY
THE JAEGER MACHINE COMPANY

CEMCO INDUSTRIES, INCORPORATED, GALION, OHIO

COMMERCIAL CAR JOURNAL, August, 1953

Is this the 100,000 mile truck tire?

B.F. Goodrich

ALL-NYLON Traction Express



"130,793 MILES and they've never been off the wheels," says W. C. Merrill (above), Vice Pres., Merrill Truck Lines, Fort Worth, Texas, about four BFG Traction Express tires. Merrill drivers report no skidding with the new Traction Express tread.



SEVERAL HUNDRED TRACTION EXPRESS TIRES are used by Akers Motor Lines, Inc., of Gastonia, N. C. This common carrier serves the Atlantic seaboard with 1,008 units, is just one of many trucking firms that use and praise these BFG tires. Traction Express tires have open spaces in the shoulders and tread that dispel heat easily, prevent heat build-up at high speeds.

Gives more original mileage than a regular tire plus a recap!

147,000 miles for an Alexandria, La., bakery firm! 125,000 miles for a Memphis, Tenn., trucker! 110,000 miles for an oil company in Pipestone, Minn.! Yes, the new B. F. Goodrich *all-nylon* Traction Express is rolling up amazing original mileage records for trucks all over the country. And amazing recap mileage records, too!

The Traction Express tread is as much as 46% thicker than that of regular tires. This extra-mileage tread is compressed to resist abrasion, add mileage and reduce cutting. When molded, the Traction Express beads are close together. When mounted, air pressure spreads the beads to full rim width. Result: the sidewalls act as levers to compress the tread for long, even wear.



ALL-NYLON CONSTRUCTION

The Traction Express is designed with a strong, nylon cord body. Nylon withstands double the impact of ordinary cord materials, resists heat blowouts and flex breaks.

And the *all-nylon* B. F. Goodrich Traction Express is built with the patented nylon shock shield. Layers of strong nylon cords under the tread protect the tire body from road hazards.

With construction features like these, no wonder truckers call the Traction Express the 100,000 mile tire. You pay a little more for the *all-nylon* Traction Express, yet you get a tire that gives more original mileage than a regular tire plus a recap! It's available in rayon construction at lower prices. See your BFG retailer. His address is listed under Tires in the Yellow Pages of your phone book. Or mail the coupon below.



Now distinctive tread design




Specify
B. F. Goodrich
tires
when ordering
new trucks

The B. F. Goodrich Company
Dept. TF-188, Akron 18, Ohio

Please send me:

- ☐ More information on the Traction Express tire
- ☐ The name of my nearest retailer
- ☐ Free book, "How to get more recaps out of truck tires"

Name _____
Company _____
Street _____
City _____ Zone _____ State _____



Sinclair sets the future pace for service to the Trucking Industry

HERE'S HOW...

- **ANTI-RUST GASOLINES** — H-C and POWER-X — and **DIESEL FUELS** — 250 DIESEL — to cut repairs and reduce downtime by preventing rust-clogged fuel systems.
- **LUBRICATING OILS** such as SUPER TENOL® designed to give more mileage between overhauls in your equipment — proved in its ability to relieve sticking valves.
- **GREASES** like Multi-Purpose LITHOLINE® to reduce your grease inventory while giving your equipment outstanding protection.
- **MULTI-PURPOSE GEAR OILS** — OPALINE GEAR LUBE BX and CX — Another time and labor saver — one gear oil for complete protection of all types of enclosed gears.
- **LUBRICATING ENGINEERS** — Backed by Sinclair's resources and their own years of training in the trucking industry; these men will be happy to apply their experience towards helping solve your lubricating problems.
- **HARVEY RESEARCH LABORATORIES** — Sinclair's source of new products to further the advance of the trucking industry.
- **SPECIAL CREDIT CARDS FOR THE TRUCKING INDUSTRY** — Our "SDA Plan" (Special Delivery Authorization) gives you direct cost control on each unit of your fleet.
- **SINCLAIR-PLANNED TRUCK STOPS** for the convenience and comfort of your drivers and for the added efficiency of your operation.
- **SINCLAIR'S TRUCK-STOP GUIDE** to help you plan stops at the most favorable points on your route.
- **SINCLAIR ROAD SURVEY SERVICE** — A proven service to help you save money on the road. Ask your Sinclair representative how this service will work for you.

SINCLAIR REFINING COMPANY

600 FIFTH AVENUE, NEW YORK 20, N. Y.

THE CCJ BULLETIN BOARD



The PM Boys Are OK

There are several brands of fleet shop mechanics that ought to take a look at themselves, cause they're causing a hell of a lot of unnecessary commotion due to some bad habits. Like:

Mel Bender—He's the type with muscles and a yen to use them on small nuts and bolts. He strips threads, breaks studs and gets the adjustment out of kilter because he can't pull his punch. What this guy does to a torque wrench shouldn't happen to an India Rubber Man.

Willie Gesso—He's the kind who thinks he remembers the specifications. He dreams up some figures that ought to work, but when they don't he "can't figure that one out." Then he's upset, and sorry, and in the doghouse.

Ivan Sagginbottom—He is the flub-dubber, the guy who takes up space and cuts down profits. Ivan is tired. His mind is on last night's accomplishments (or failures) whichever the case may be. He is so slow that he couldn't catch a tired germ with an antibiotic.

Seldom Wright—He's the guy who can do anything—but mostly wrong. He installs parts upside down when they should be down-side up and vice-versa. He's fast, but then he ought to be. He's had so much experience doing the job over. It is said that Seldom has worn out three reverse gears in his own car, just backing up at the wrong corners.

Ben Gripping—Ben doesn't like it; he just doesn't like it. He's agin' management, maintenance, morale, morals, and Mabel. Only thing he ever agrees with is payday. And payday never agrees with him.

But there's one man we must not overlook, Ace Goodwin. Ace is the backbone of the fleet shop. He's the pillar of accuracy, the highly skilled technician, handyman, inventor and, sometimes, bird-dog. If you find yourself in this category, give yourself a pat on the back—when no one is looking.

Let's hope (if we make it) that Ace gets in Up There so he can maintain the golden chariots. I, for one, wouldn't want to trust chariot PM to the others, and it's too hot to walk.

WHEN IT COMES TO HYDRAULIC JACKS ... YOUR BEST BUY IS A BLACKHAWK!



ONLY BLACKHAWK JACKS ARE TAGGED WITH THE FAMOUS "SERVICE PROVED" SEAL

Yes, Blackhawk is the only hydraulic jack line developed from a *complete* service-proved background. Designs are based on an *unmatched* range of experience in building hydraulic equipment for varied applications. That's why Blackhawk gives you *every* wanted feature . . . why for 21 years in a row Bus Transportation "Maintenance Efficiency" winners predominantly have used Blackhawk Jacks! *So buy the best — buy Blackhawk — from your jobber.*

A product of
BLACKHAWK MFG. CO.
Dept. J-1183
Milwaukee 1, Wisconsin





Laugh it off!

LIPPY LOUIE, OUR SAFETY-CONSCIOUS, YARD HOSTLER SAYS: "THE HAND THAT LIFTS THE CUP THAT CHEERS SHOULD NOT BE USED TO SHIFT GEARS."

CCJ

Irate Mother: "Why did you take so much time last night saying good bye to that milk truck driver?"

Daring Daughter: "It's like this, Mother. If a guy takes you to the movies you ought to at least kiss him goodnite."

Irate Mother: "I thought you went to the Stork Club?"

CCJ

Safety Sadie: "That certainly is a scrumptious dress you have on, honey."

Catty Cora: "Thank you, thank you, ma'am. This is what I wear to teas."

Safety Sadie: "Whom?"

CCJ

Gal Manifest Clerk: "I had a date with one of the shop foremen last nite from out in the maintenance section. And, honey, we sure did have a la-de-dah time."

Gal Billing Clerk: "What did you do?"

Manifest Clerk: "Don't be juvenile, darling. Haven't you ever been out with a maintenance man?"

CCJ

Classy Chassis Blonde: "Looka here, Mac, there's one thing I want to make perfectly clear to you before we drive any farther. I absolutely do not pet. So don't try to hug or kiss me. Have I made myself clear?"

Romeo Truck Driver: "Yes. Indeed you have."

Classy Chassis Blonde: "Now that we have settled that important matter, where are we going?"

Romeo Truck Driver: "Home!"

CCJ

DOCTOR: "DID THAT MEDICINE I GAVE YOUR HUSBAND STRAIGHTEN HIM OUT?"

WIFE: "IT SURE DID. WE BURIED HIM YESTERDAY."

Gypsy Trucker: "Gimme a quart of anti-chatter oil, Mac."

Garage Operator: "Shall I put it in your motor?"

Gypsy Trucker: "Heck, no, I want it for my wife. Maybe it'll stop some of her yakety-yak."

CCJ

Overheard on the telephone:

Diesel Mechanic: "Aw gee, babe, please let me come over tonite."

Luscious Lucy: "Nope! Not tonite!" Diesel Mechanic: "Pretty, please. I got three tickets to da movies."

Luscious Lucy: "Nothin' doin'. And, anyways, why do you want to take a third party?"

Diesel Mechanic: "Geez, Lucy. Da tickets ain't for us. They're for your father, mother and little brother."

Luscious Lucy: "Okay, big boy. Don't just stand there. Hang up and get movin'."

CCJ

First Road Driver: "Boy, you need a piece of raw beefsteak for that shiner. What in the world boffed you in the eye?"

Second Ditto: "You know that snappy strawberry blonde babe over on Fourth Avenue, who's husband is in Korea?"

First Road Driver: "Yes, why?"

Second Ditto: "Well, he ain't!"

"Cici Jay"



"FASTEST SECRETARY I EVER HAD," SAID THE PRESIDENT OF FLEETY-FLEET MOTOR EXPRESS, AS HE PUT ON HIS TRACK SHOES.

CCJ

Steno Lou: "It's easy to write a play. First act, boy meets girl; second act, they hold hands; third act, they kiss."

Steno Sue: "Maybe you think so. That's how my boy friend got arrested."

Steno Lou: "What do you mean?"

Steno Sue: "He wrote a five-act play."

CCJ

Truck Mechanic: "Hooray, yip-a-hooty. Congrashulate me, gentlemen, I jush become a father. I want to regisher the birsh of twins."

County Registrar: "Now see here my good man. Why do you say 'Gentlemen,' can't you see I'm alone here?"

Truck Mechanic: "Thuh devil you say! I guesh I'd better go back to thuh hoshpital an' have another look!"

CCJ

Steno Fay: "Horace called up the house four times before I consented to give him a date."

Steno May: "Who did he ask for the first three times?"

CCJ

Gasoline Engine Mechanic: "Bad liquor is somethin' I've always been afraid of. Wish I knew a good simple test to use."

Diesel Engine Mechanic: "Well, I can give you that. The best way to test whiskey for potable quality is to pass electricity through a quart of the stuff. If the current causes a precipitation of lye, tin, arsenic, iron slag and alum, the whiskey is fair. If the liquor chases the current back to the generator, boy you've got real corn nectar."

CCJ

COED: "I'LL STAND ON MY HEAD OR BUST."

GYM INSTRUCTOR: "JUST STAND ON YOUR HEAD. WE DON'T ASK TOO MUCH."

Resume Work

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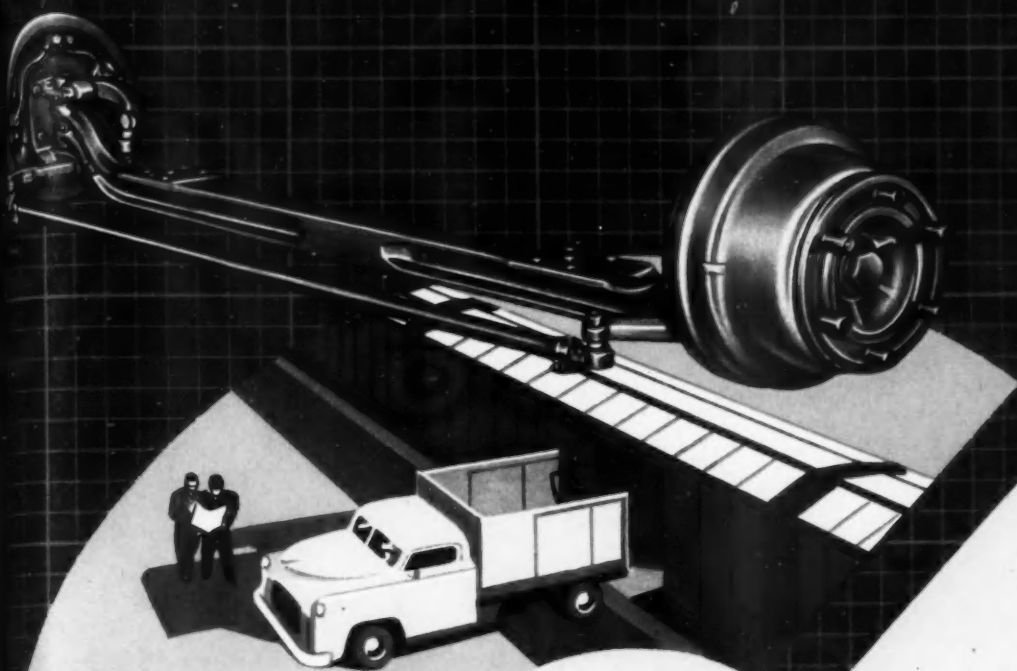
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ust, 1953



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1953

FIRST FIFTY YEARS
CLARK
EQUIPMENT

CLARK

If ever there was a project that called for ignoring common practice and getting back to actual requirements, it's the development of a drive mechanism for a modern commercial vehicle—automotive, agricultural or industrial . . . Consult Clark—about a driving unit designed to meet the functional operating needs of your particular machine.

. . . Clark engineering has always pioneered, since the first Clark axle in 1916, and still does—which is why leading industries like to "Work with Clark."

Turn and see
reverse side for
more about
CLARK products

CLARK EQUIPMENT COMPANY, Buchanan, Michigan

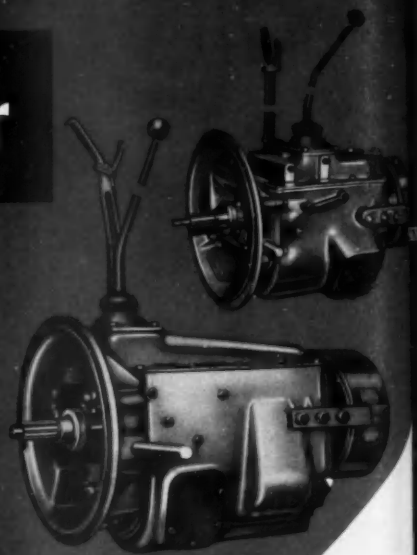
Other Plants: BATTLE CREEK AND JACKSON, MICHIGAN

CLARK'S Split-Pin Synchronizer

The "Split-Pin" Synchronizers are new in these two Clark transmissions now available—what is not new is the Clark enthusiasm for engineering research, combined with the practical knowledge of industry's needs.

It is this traditional Clark attitude toward design that will continue to produce a full line of standard transmissions, and continue to tackle and solve special problems involving unusual transmission requirements . . . for trucks, busses, farm tractors, industrial trucks, and road building machines.

Write for Products Booklet.

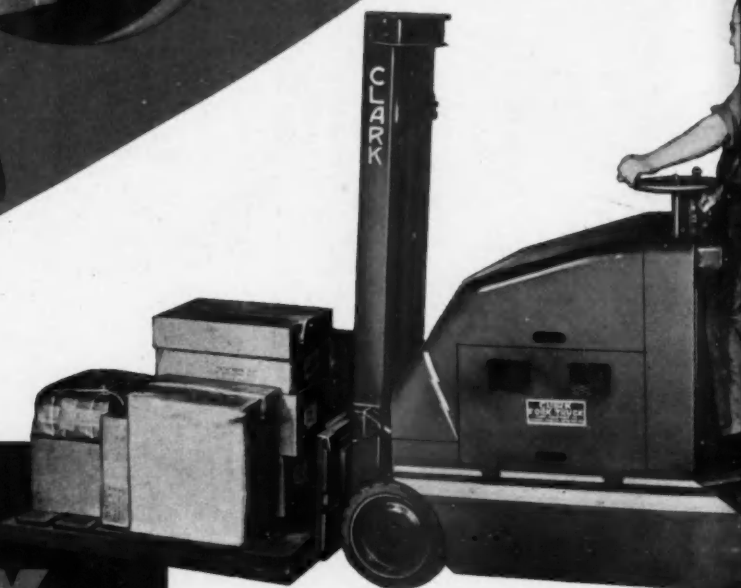


Meet CLARK'S New STOWAY

WHY PAY FOR costly repairs and down-time on equipment that's supposed to save money? Here's a brand new stand up truck, built for (and by) people who know that quality machines always pay off in longer life, greater production. 2000-lb. capacity, electric-battery power, 60-inch turning radius and 360-degree steering—the STOWAY is the quality truck for close-quarter work.

For freight terminals and warehouses—for narrow aisles, congested floor space, operations where the driver is constantly on-and-off to sort out shipments and make up cargoes—the STOWAY is job-engineered to fit the handling pattern. Take the headaches out of L.C.L. handling, the bottlenecks out of cluttered terminals and warehouses—with Clark's new STOWAY.

Write for Material Handling News.



CLARK EQUIPMENT

CLARK EQUIPMENT COMPANY
BUCHANAN, MICHIGAN

Other Plants: Battle Creek and
Jackson, Michigan

Products — TRANSMISSIONS • AXLE HOUSINGS
• GEARS and FORGINGS • TRACTOR
UNITS • FORK TRUCKS and TOWING TRACTORS •
FRONT and REAR AXLES for TRUCKS and BUSSES

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PLANTS



Hypoid Gearing

**CUTS TRUCK MAINTENANCE COSTS
—ADDS EXTRA MILEAGE**

**Years were spent in developing,
testing and proving Hypoid for
use in heavy-duty trucks**



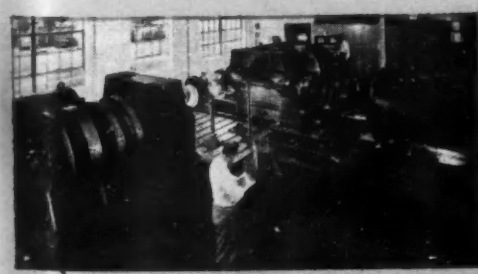
Truckers today are getting more miles per truck, under tougher operating conditions, than ever before. Such major improvements as Hypoid gearing, developed and built by TDA, are increasing truck life and reducing maintenance in spite of the heavy schedules of a defense economy.

Used on many makes of automobiles for more than a decade, Hypoid gearing is strictly a postwar development in medium- and heavy-duty truck axles. TDA, realizing its inherent advantages, spent years developing and testing before the first Hypoid-gear truck axles were placed in mass production. Today, only TDA offers Hypoid gearing

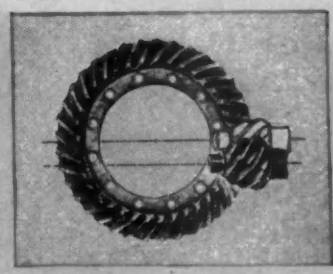
in all three types of final drives—single-reduction, double-reduction and two-speed double-reduction—in a complete range of capacities.

Although a relatively new development, Hypoid truck axle gearing has been fully tried and proved. Billions of ton-miles have been rolled up in actual on-the-job operation since it was first introduced to truckers by TDA a few years ago. Find out why you should insist on rugged, dependable Hypoid gearing in the next medium- and heavy-duty trucks you buy. Write to TDA for an informative, illustrated booklet on Hypoid gearing.

1903
1951
CLARK
EQUIPMENT



A COMPLETE "INDOOR PROVING GROUND" makes it possible for TDA engineers to test heavy-duty truck axles under the same conditions as those that are actually encountered on the toughest stretches of America's highways. Truck axle torques and speeds can be reproduced, and repeated accurately, time after time. Advanced engineering facilities like this enable TDA to design and build the finest truck and bus axles in the world.



HYPOID PINION IS OFFSET FROM THE CENTERLINE OF THE GEAR. As a result the pinion is bigger and stronger. Bearings are bigger. More teeth are in contact, reducing loading per unit of contact area. Torque transmitting capacity is increased. Slower gear ratios are practical without loss of strength.



THE TIMKEN-DETROIT AXLE COMPANY
Detroit 32, Michigan

**WORLD'S LARGEST
MANUFACTURER OF AXLES FOR TRUCKS,
BUSES AND TRAILERS**

PLANTS AT: DETROIT AND JACKSON, MICH. • OSHKOSH, WIS. • UTICA, N. Y. • ASHTABULA, KENTON AND NEWARK, OHIO • NEW CASTLE, PA.



V. D. Ecoff,
President of
Ecoff Trucking Inc.
Fortville, Indiana

One of 61 specially built tank trailers used by Ecoff Trucking Inc. for hauling chemicals and acids. Payload is 42,000 pounds.

52 of these tankers are equipped with ASF Safety 5th Wheels' . . . now the standard replacement as other 5th wheels wear out.

Remember this... about

Largest king-pin bearing area of any 5th wheel . . . Absorbing stresses with a larger bearing area—50% larger than any other wheel—means longer life for king-pin and jaws.

Shorter king-pin bending leverage . . . Only $1\frac{1}{4}"$, compared with an average of 2" for other wheels. Gripping the pin at the very top keeps it straight.

Automatically adjusting king-pin grip . . . It's the only wheel with jaws that adjust to king-pin diameter. Even pins worn as much as $\frac{3}{16}"$ undersize are gripped tightly!



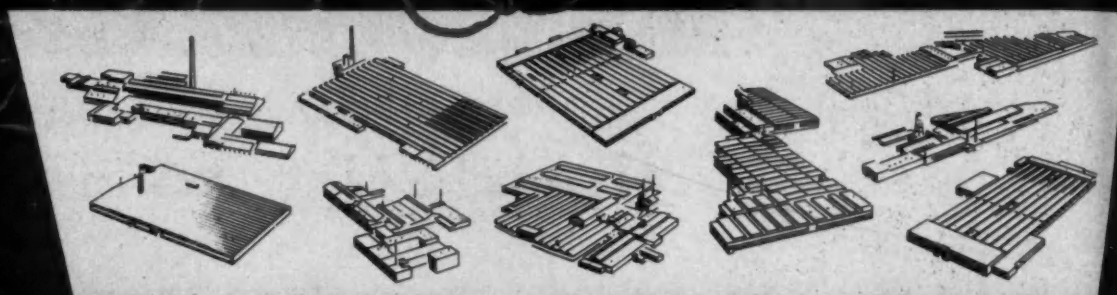
Heavy trunnion-type brackets . . . Tractor pull and trailer weight carried on 26 square inches of trunnion area, instead of on pins, eliminates difficulties of usual pin-type bracket. Deep sockets in the plate bring it down close to brackets for a straight-line pull.

Easy to maintain in perfect operating condition . . . Wear is inevitable, but on ASF wheels it's easily counteracted simply by inserting one or more low-cost shims between bracket and housing front wall. Result? Like-new performance, without expensive rebuilding!

the desire to serve

The will to serve is a Spicer tradition backed by nearly 50 years of outstanding achievement. It has been the impetus behind the wide range of Spicer accomplishments, that have done so much to make automotive vehicles so efficient.





the ability to serve

The Spicer will . . . plus Spicer skill and resources . . . form a strong ability team. Ten modern plants, geared to modern manufacturing tempo, are producing equipment that is the Standard of the Industry. We are prepared to design, develop, engineer and manufacture . . . with a high degree of excellence . . . your special needs in power transmission units.

SPICER MANUFACTURING DIVISION
of Dana Corporation • Toledo 1, Ohio



49 YEARS OF
Spicer
SERVICE

ENGINEERING

DANA

MANUFACTURING

TRANSMISSIONS • UNIVERSAL JOINTS • BROWN-LIPE AND AUBURN CLUTCHES • FORGINGS
PASSENGER CAR AXLES • STAMPINGS • SPICER "BROWN-LIPE" GEAR BOXES • PARISH FRAMES
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RAILWAY GENERATOR DRIVES • WELDED TUBING

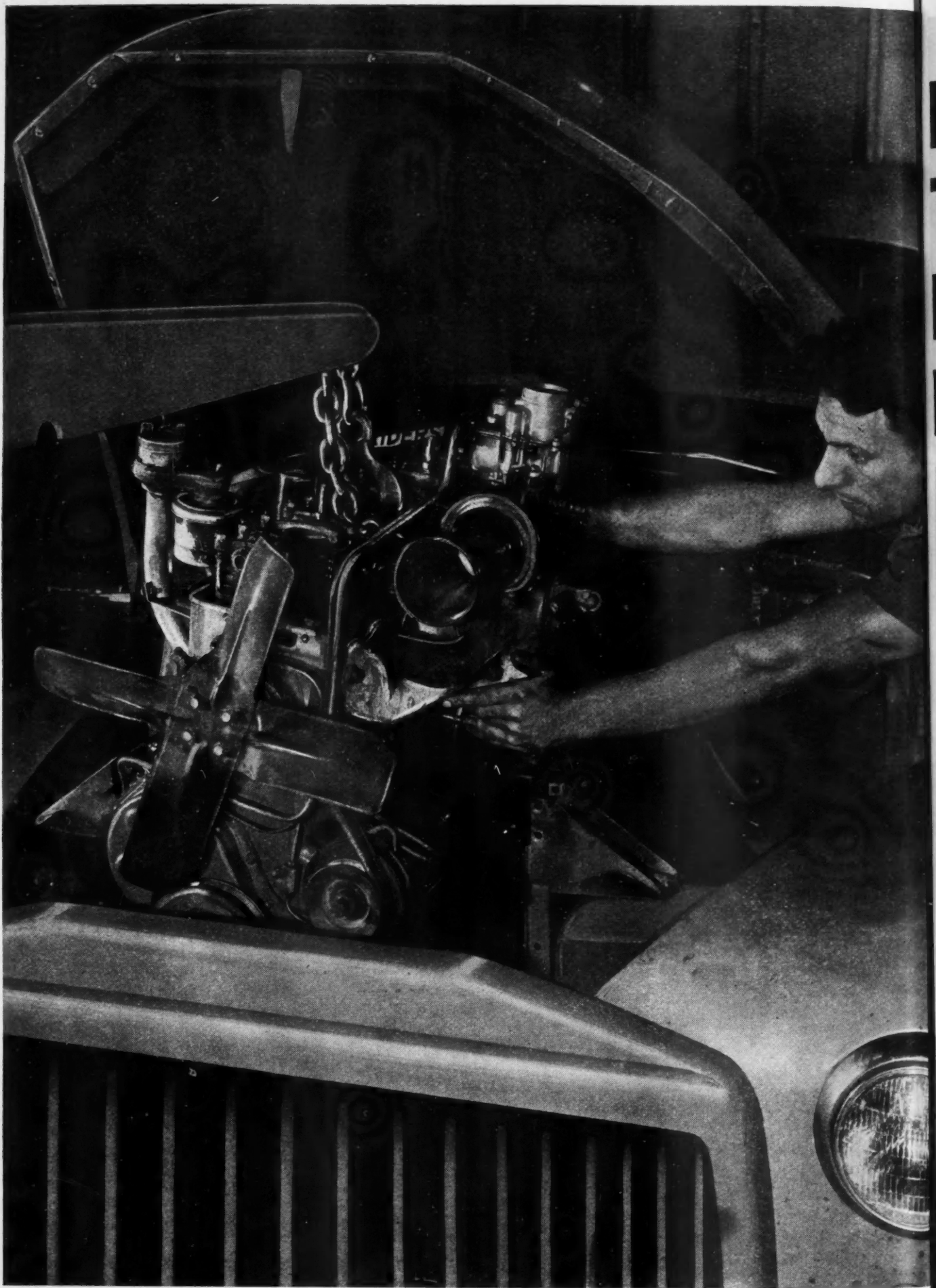
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MAINTENANCE COST SHEET

Records prove Prest-o-lite
batteries reduce operating
costs...need water only
1/3 as often as ordinary
batteries...last longer, too!

Phone Prest-o-lite wholesaler
for special fleet prices





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COMMERCIAL

BROWN TRAILERS MEET THESE RECOMMENDATIONS IN FULL!



And with one small exception ALL ARE STANDARD EQUIPMENT

The Equipment Development Committee of the Common Carrier Conference, ATA is making a valuable contribution in bringing to the attention of truck-trailer manufacturers, the features most desired and needed in trailer construction. Listed at the right are the committee's most recent recommendations. All of these features may be obtained in a lightweight Brown Trailer — most of them have been standard for years.



TOLEDO • SPOKANE • READING
Distributors in principal cities

Recommendations of the Equipment Development Committee, Common Carrier Conference of ATA, to Trailer Manufacturers

- ✓ ATA electrical connector
- ✓ ATA color coded wire
- ✓ Metal conduit all wiring
- ✓ Externally accessible wiring
- ✓ 18" Radius front corners
- ✓ 80" King pin to landing gear
- ✓ 36" Standard king pin location
- ✓ 12'-6" Height with 48" king pin HT.
- ✓ Standard fifth wheel heights
- ✓ Class "A" turn & direct. signals
- ✓ Standard 35' model
- ✓ Maximum cubic capacity
- ✓ Balanced wheels
- ✓ 110V. Recessed ceiling lights
- ✓ Minimum lubrication

With the exception of recessed ceiling lights, all of the above are STANDARD EQUIPMENT at NO EXTRA cost in a BROWN.



Look to **TRU-STOP** Brakes for Greater Highway Safety

● TRU-STOP is a triple-purpose brake which attaches to the drive shaft of any truck or bus. It serves as an emergency brake, as an auxiliary brake on long down grades, and as a positive parking brake.

The smooth action and the decided deceleration when the brake is applied by hand gives the driver better control. It reduces dangers of accidents and promotes greater highway safety.

You can have them installed at the factory on new vehicles. The cost is not high. It is an investment which can pay big dividends in vehicle safety.

Write today to our Detroit office for literature.

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AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE

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601 Stephenson Bldg., Detroit 2 • 2475 Porter Street, Los Angeles 21 • Bridgeport 2, Conn.



Get pulling power at low cost with a husky Studebaker truck

Big mileage per gallon!

Remarkably low upkeep!

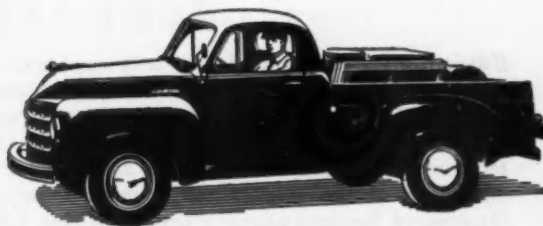


GET big pulling power at a big saving. Put a husky Studebaker truck on the job and cut costs. Studebaker's Power-Plus truck engine has the big torque you want for hefty loads. It saves gas because you get going quickly—and keep rolling smoothly.

Studebaker truck craftsmanship stands up superbly—gives you plenty of relief from upkeep expense.

Stop in at any Studebaker showroom and examine the design and structure of a sturdy new Studebaker truck. See for yourself why it saves.

America's best looking light-duty trucks, too



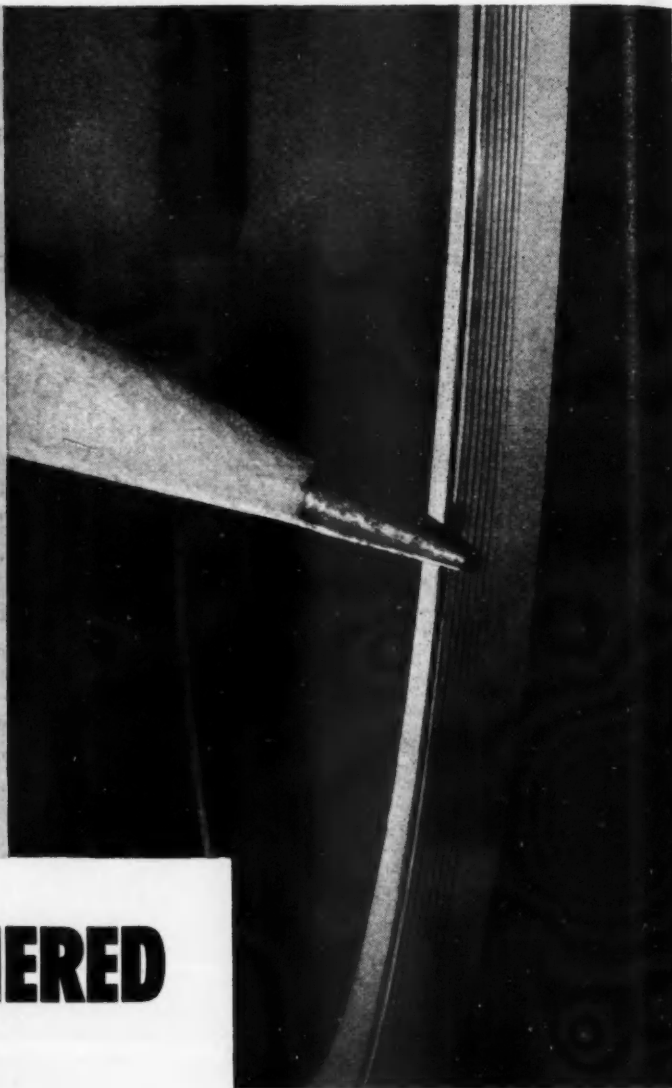
The husky 1½ and 2 ton Studebaker trucks have three great gas economy team-mates—streamlined ½, ¾ and 1 ton models. You have your choice of either the thrifty Econ-o-miser engine or the high torque Power-Plus engine.

The Studebaker Corporation, South Bend 27, Indiana, U. S. A.

Decorative and other specifications subject to change without notice.

STUDEBAKER TRUCKS...NOTED FOR LOW COST OPERATION!

**Efficient
break-in of
new ring sets is
a key point in
satisfactory fleet
maintenance...
here is
photographic
proof of the
efficiency of**



AMERICAN HAMMERED

Krome-Oil

PISTON RING SETS

Efficient break-in on ring jobs is only one factor in fleet maintenance. American Hammered Krome-Oil Piston Ring Sets are also pre-seated for instant oil control. The top groove compression ring and the oil ring are chrome-faced for extra long life. And the oil ring spring has more oil slots than any other on the market. This unique design eliminates sludge clogged oil rings and springs. These American Hammered features assure a top-notch ring job, one that will keep your fleet rolling more trouble free miles between overhauls.

American Hammered

AUTOMOTIVE REPLACEMENT DIVISION

2001 Sanford Street, Muskegon, Michigan

Manufacturers of American Hammered Automotive Replacement Piston Rings

For the best in fleet maintenance remember American Hammered Power-Plus Service—Koetherizing • 61-60 Groove Insert • Dry Film Lubricant

Study this photograph carefully. It is a top groove American Hammered Krome-Oil Compression Ring pulled after 5000 miles of extremely heavy duty use in a rugged fleet operation. Note the smooth, even way it is wearing-in. High unit pressure and narrow land contact, coupled with the long wearing qualities of chrome, impart maximum efficiency and durability.



Smart new blue and yellow American Hammered Krome-Oil carton is the quality mark in the automotive piston ring replacement field. Look for it when you want the best in ring jobs!



No wheel failures with **ALCOA forged aluminum disc wheels...**

says C. A. Wallace

"Long distance lumber hauling is my specialty," says C. A. Wallace, Fresno, California. "The main reason for choosing Alcoa Aluminum Wheels was the saving in weight. In three years, I have never had a wheel failure and I am saving approximately 750 pounds per unit, thereby increasing my payload. Needless to say, all my future units will have Alcoa Aluminum Wheels."

Hundreds of truckers will back up C. A. Wallace, not only on weight saving, but on these four other major features:

TRUE-RUNNING! Alcoa Forged Aluminum Wheels are precision-made, machined to close tolerances. Results—better balance, truer running qualities that mean easier steering, longer tire life, a smoother ride.

RAPID HEAT DISSIPATION! Tire temperatures are kept lower because one-piece Alcoa Forged Aluminum Wheels conduct heat rapidly away from the tires. When tires run cooler, they give greater mileage.

MINIMUM MAINTENANCE! Alcoa Forged Aluminum Disc Wheels resist corrosion, never have to be painted. Tire changing is easier because there is no rust. Rim surfaces remain smooth so tire beads loosen easily during tire changing.

PROVED STRENGTH! Laboratory tests and thousands of miles of road runs have proved Alcoa Forged Aluminum Disc Wheels match or excel steel wheels in strength and rigidity. Aluminum Company of America, 1871-H Alcoa Building, Pittsburgh 19, Pa.

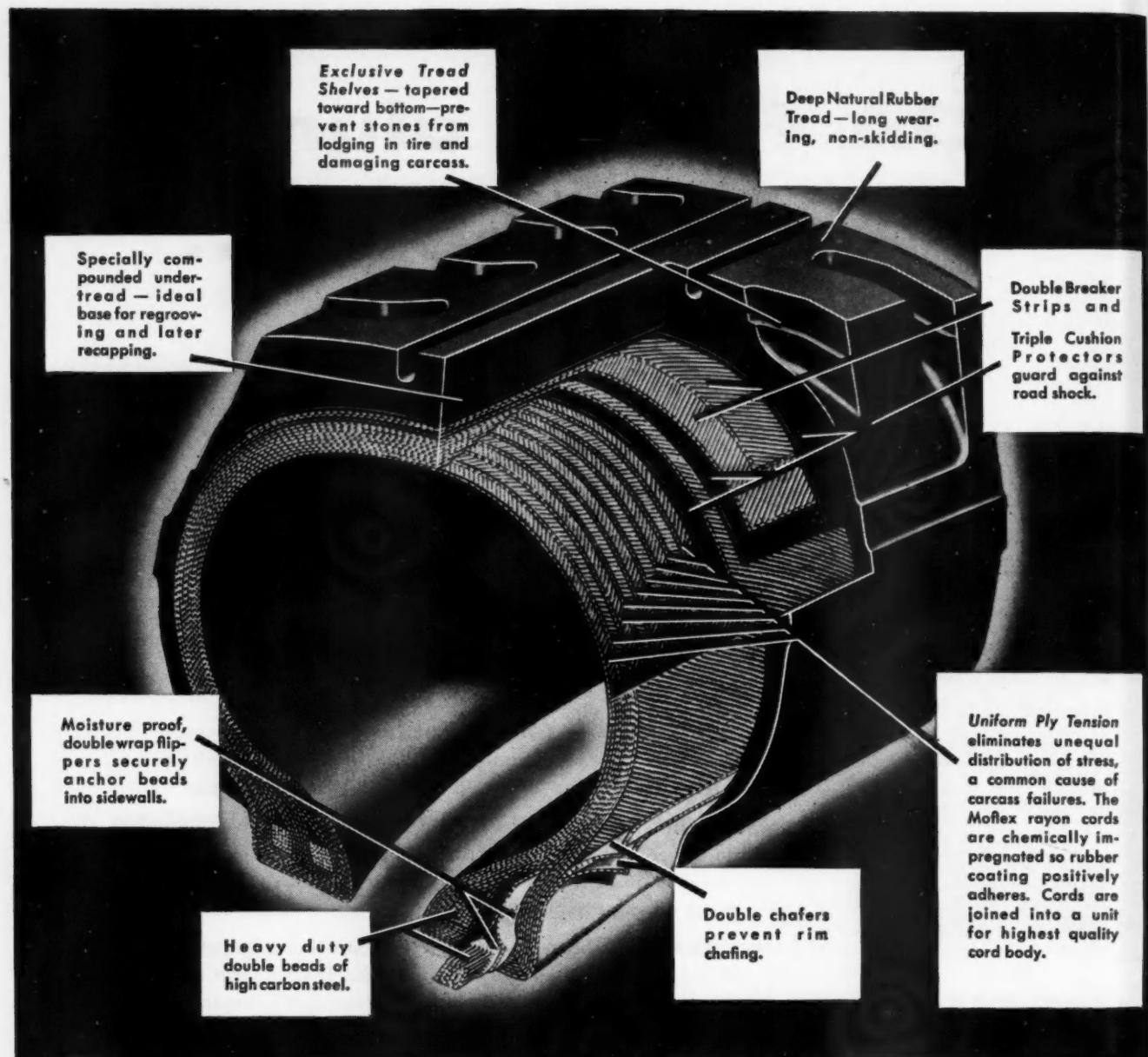


Alcoa **Aluminum**



ALUMINUM COMPANY OF AMERICA





WHY the MOHAWK BIG CHIEF gives you MORE for your tire dollar



THE MOHAWK RUBBER COMPANY
 Plants: AKRON, OHIO • LITTLETON, COLORADO
 Export Department: 1819 Broadway, New York 23, N.Y.
 Cable: "MOHAWK" New York

The many features illustrated above prove that Big Chief quality is more than skin deep. Fleet owners prefer these heavy tread tires for extra mileage and greater recappability . . . Big Chiefs are specially suited for use on farm and milk trucks, gravel, logging and mining trucks and drive wheels of over the road trucks . . . Let us show you how Big Chiefs will give more service per tire dollar on *your* fleet.

As the
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furnishe
of the t
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Toda
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4925

Is

COMMER

20-mule team wagons had *POWER STEERING...*



As the primitive 20-mule team wagons loaded with borax creaked their way 167 miles out of the bitter wastes and murderous heat of Death Valley, the drivers had the benefit of power steering. The mules furnished the power for steering as well as propulsion of the two 4-ton wagons. The driver only guided the mules.

Today's truck transport is generally superior in every way but one. Too often the far heavier manual steering load is on the arm, shoulder and back muscles of the driver. This tiring work slows him down, reduces his efficiency, makes him "accident-prone."

Vickers Hydraulic Power Steering makes the heaviest vehicle almost effortless to steer . . . even under the brutal conditions of nearly roadless deserts

like Death Valley. A light finger touch is enough. Ruts, soft shoulders, obstructions, flat tires, off road conditions cannot cause wheel spin or loss of control. Steering no longer fatigues the driver—he remains fresh, efficient, safe.

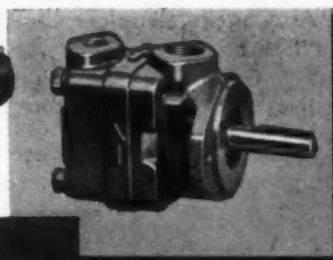
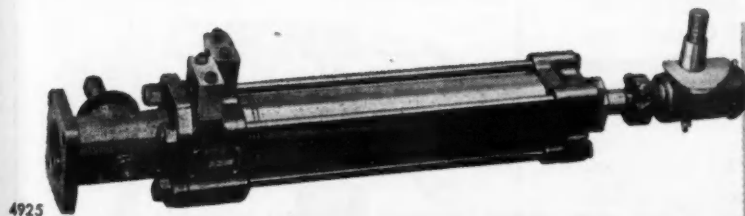
For further information on Vickers Hydraulic Power Steering, ask for Bulletin M-5100.

VICKERS Incorporated

DIVISION OF THE SPERRY CORPORATION

1418 OAKMAN BLVD. • DETROIT 32, MICH.

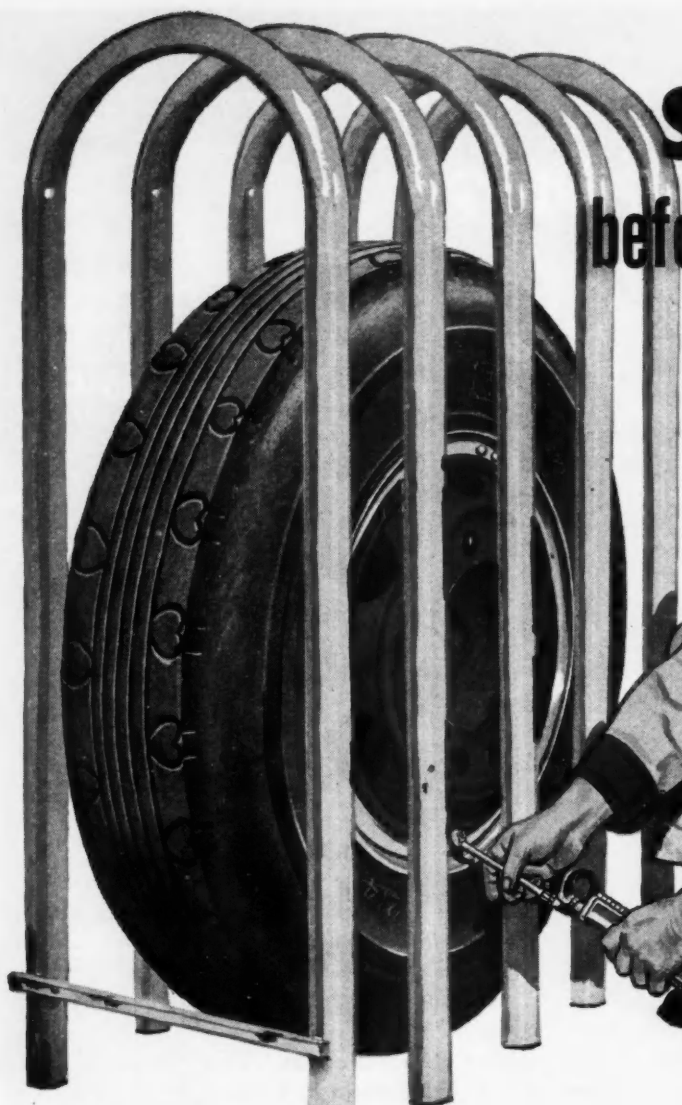
Application Engineering Offices: ATLANTA • CHICAGO (Metropolitan)
CINCINNATI • CLEVELAND • DETROIT • HOUSTON • LOS ANGELES (Metropolitan)
NEW YORK (Metropolitan) • PHILADELPHIA • PITTSBURGH • ROCHESTER
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VICKERS hydraulic

POWER STEERING

Is Effortless, Positive and Shockless



STOP roadside flats before they happen—

It can be done quickly right in your shop!

Gauge and record the air pressure of all tires regularly. A comparison of readings will save time and money in the operation of your fleet, because most flats give a slow-leak warning signal that can only be found by accurate gauge readings.

Certify the accuracy of your gauging-inflating equipment with a Schrader 8106B Trutest Special Gauge. For faster, better operating air lines use Schrader Air Chucks, Couplers, Chuck Gauges and Accessories. For all your tire inspection work use the Schrader 7188BH All-Purpose Service Gauge. Be sure you get first quality products from your supplier. Specify Schrader.

FREE! Write today for a sample set of Schrader Fleet Air Loss Record Cards. . . Try recording and comparing gauge readings to discover and prevent flats.

A. SCHRADER'S SON

Division of Scovill Manufacturing Company, Incorporated
470 Vanderbilt Avenue, Brooklyn 38, N. Y.

Schrader

REG. U. S. PAT. OFF.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

Schrader Products important to best tire maintenance



8106B for checking all other gauges



7188BH All-Purpose Service Gauge



2030 Chuck Gauge

7612 Heat-resisting cap



7611 Heat-resisting core

DESIGNED

with
your
reputation
in mind...



● Globe-Union custom-built batteries, merchandised under the name GLOBE "Spinning Power", are specified for many original equipment manufacturers as well as a host of private brands. That's because the thoroughly tested, long-life Globe batteries are creatively engineered to provide superior performance and greater dependability right from the start.

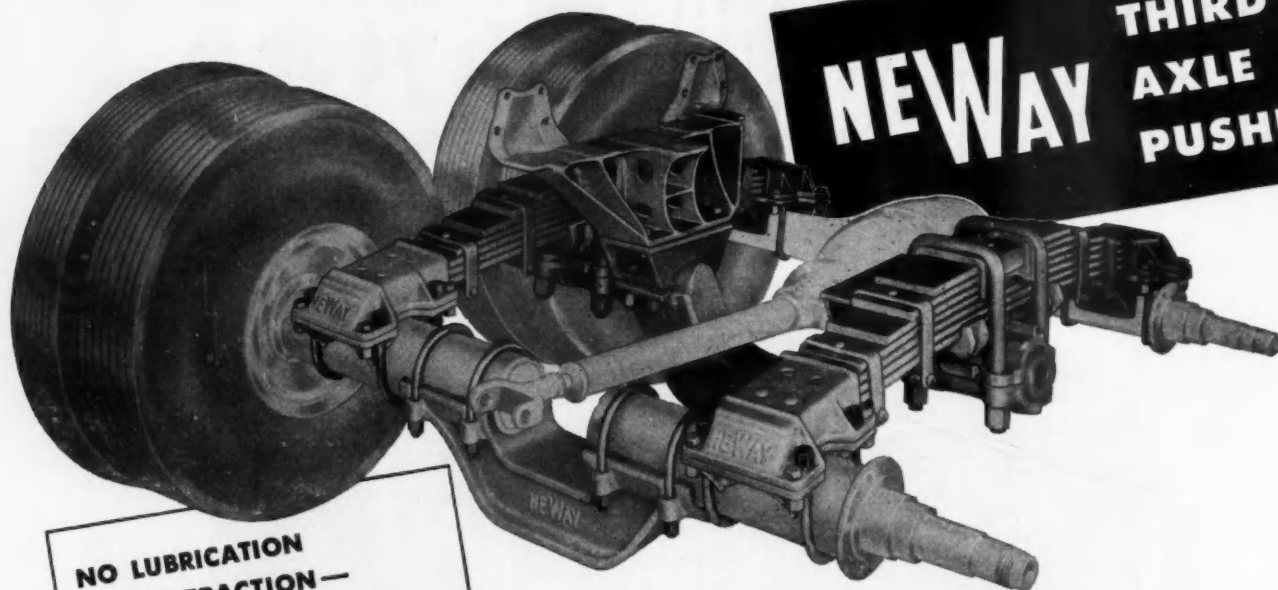


GLOBE-UNION INC.
MILWAUKEE 1, WISCONSIN

IF IT'S PETROLEUM POWERED, THERE'S A GLOBE-BUILT BATTERY — RIGHT, FROM THE START.
GLOBE BATTERY PLANTS ARE LOCATED AT: ATLANTA, GA. • BOSTON, MASS. • CINCINNATI, OHIO • DALLAS, TEXAS • EMPORIA, KANSAS • HASTINGS-ON-HUDSON, N. Y. • LOS ANGELES, CALIF. • MEMPHIS, TENN. • MINERAL RIDGE, OHIO • OREGON CITY, ORE. • PHILADELPHIA, PA. • REIDSVILLE, N. C.

increase your payloads with

NEWAY THIRD AXLE PUSHER

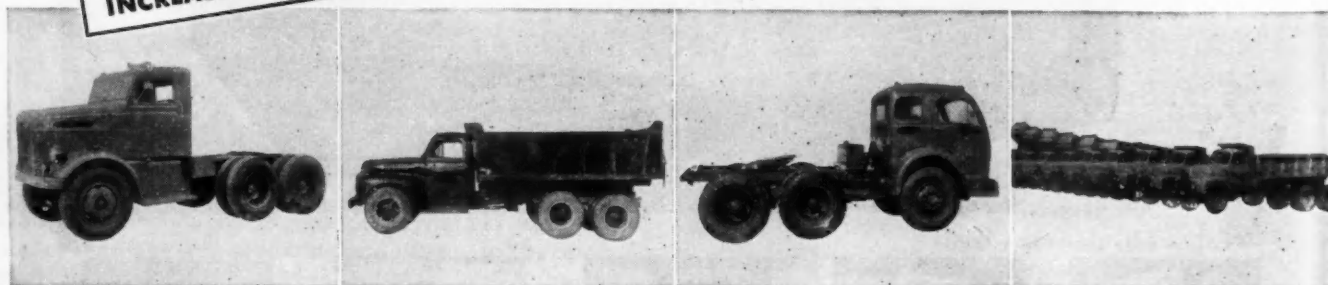


**NO LUBRICATION
BETTER TRACTION—
LESS TIRE WEAR
BETTER WEIGHT
DISTRIBUTION
LOW INSTALLATION COST
BETTER RIDE
MORE POSITIVE STEERING—
LONGER WHEELBASE
INCREASE YOUR PAYLOAD**

The NEWAY Third Axle PUSHER gives ample flexibility for all highway and semi off-the-highway use. All points of movement are rubber mounted, eliminating wear as well as the need of lubrication for the life of the unit.

The NEWAY Third Axle PUSHER assembly is mechanically attached to the truck frame and the component parts welded to secure permanent alignment. These are exclusive features that you get only with NEWAY equipment.

For complete information ask for NEWAY Bulletin No. 52.

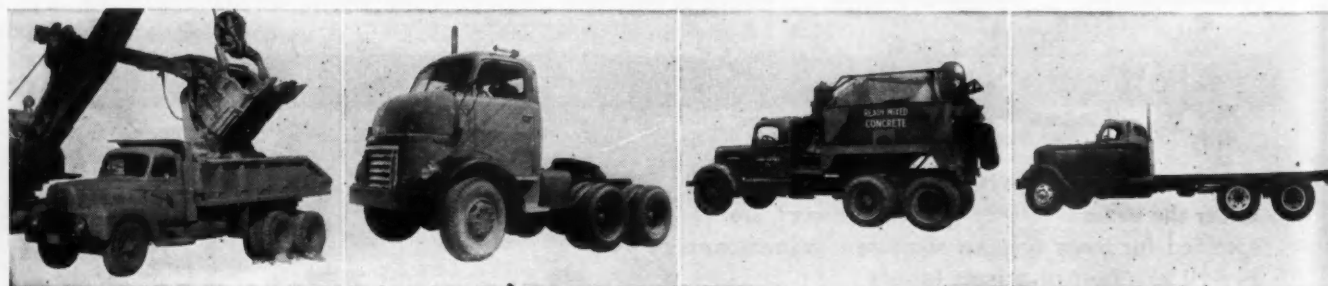


Corbitt Tractor

Ford F-8 Truck

White Cabover Tractor

International Trucks



International Dump Truck

GMC Diesel 740

White Model WB-22

International Diesel Tractor

NEWAY Equipment Company

MUSKEGON, MICHIGAN and
201 S. E. Washington St., Portland, Oregon

ALSO MANUFACTURERS OF TRAILER TANDEM SUSPENSIONS AND TRUCK AND TRACTOR PUSHER THIRD AXLES

why worry about peak loads... lags... emergencies? Rent a truck...

Call
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Whatever your trucking needs, it's easy... convenient... and economical to call Hertz and get the exactly right truck at minutes' notice.

It's easy... smart... economical to rent a truck from Hertz whenever you need it... for as long as you need it. With this simple plan, you don't have to turn down peak business. You can always handle your hauling if your own trucks are in for repairs... or if you do not have enough trucks to handle your loads. Also, when you rent trucks from Hertz, you don't have to worry about maintenance. Hertz furnishes all gasoline, oil, Public Liability, Property Damage, Fire and Theft Insurance and \$100.00 deductible collision protection. You supply the driver—and *nothing else!* And remember this. With the Hertz Truck Rental Service you need not tie up large capital investment in privately-owned trucks that often lay idle.

There's no Truck Rental Service as complete as HERTZ SERVICE

Who rents from Hertz? Large corporations, small companies and individuals, too, rent trucks from Hertz. You need only a driver's license and normal identification to rent exactly the kind of truck you need for your specific job. In most of the more than 500 cities in the nationwide Hertz System, fleets of 1/2 ton, 1 ton, 2 ton, pickup, panel, van and stake body trucks are available and are always kept in excellent condition.

How much red tape? None at all! Accredited business firms simply call on the phone, make arrangements, send a driver for the truck. Call your Hertz station any time and rent a truck. In a matter of minutes you or your driver will be on the way! You pay only for actual time and mileage... no hidden charges of any kind.

How small the cost? For example: the rate for use of a GMC van panel for 1 day in Los

Angeles, California, is only \$6.50, plus 10 cents per mile, including gasoline, oil and insurance. Thus, the total cost for a 30 mile trip is only \$9.50. Rates lower by the week or on long-term lease. (In some cities, the rates may vary slightly from the above example.)

Rent passenger cars from Hertz, too! Hertz, world's largest, has properly conditioned, current model passenger cars for rent in more than 500 cities throughout the United States, Canada, Alaska, Hawaii, Cuba, Great Britain, Mexico, Haiti, the Virgin Islands and Switzerland. Rent a new Chevrolet or other fine car and drive it as your own for as little or long a time as you want! All gasoline and oil are provided. Public Liability, Property Damage, Fire and Theft Insurance and \$100.00 deductible collision protection are included in the low rate—at no extra cost. Countless thousands rent cars from Hertz for business or pleasure—try it!

Short term rent—long term lease. Hertz' Truck Lease Plan, for one truck or a fleet... is a proved plan that releases capital investment, and yet gives every single advantage of ownership, at a cost often less than ownership! For complete information about either short-term renting, or long-term leasing, call your nearest Hertz station, or write to the address below. Learn the facts. You'll profit!



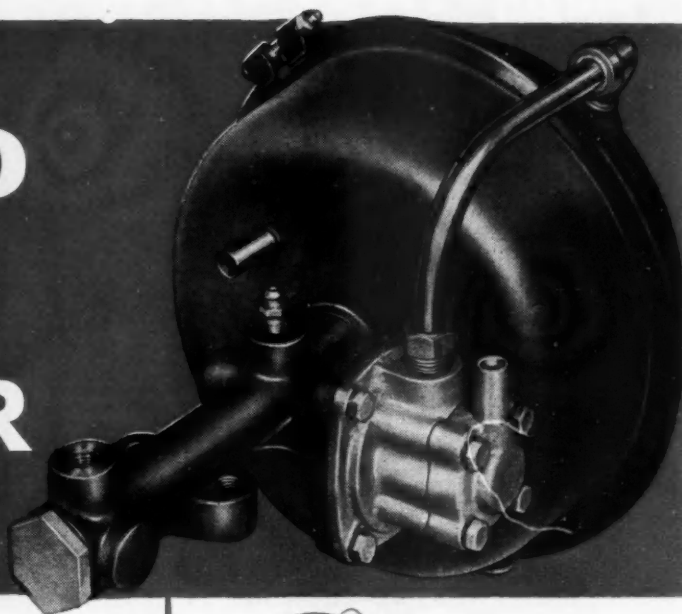
Look in your telephone directory under "H" for your nearest Hertz station

National Headquarters: **HERTZ Truck-Rental SYSTEM** Dept. 583, 218 S. Wabash Ave., Chicago 4, Ill., phone: WEbster 9-5165

COMMERCIAL CAR JOURNAL, August, 1953

MIDLAND *LEADS AGAIN* with New Improved Diaphragm Type

MIDLAND VACUUM HY-POWER



CHECK THESE ADVANTAGES OVER OTHER TYPES OF VACUUM-OVER-HYDRAULIC POWER UNITS

Requires no lubrication — therefore performance characteristics do not change with extremely low or high temperatures.

Absolutely air tight at all times and in any position of its stroke.

Friction losses reduced to the minimum.

Operation not affected by moisture or condensation.

Performance not impaired by body dents or dings.

More economical to service.

THE MIDLAND STEEL PRODUCTS CO.

3641 E. MILWAUKEE AVE.

DETROIT 11, MICH.

Export Department: 38 Pearl St., New York, N. Y.



Those Who Know
Power Brakes
CHOOSE MIDLAND

Now
Being
Delivered
To Leading
Truck
Manufacturers
For
Factory
Installation
And
Available
Through
Midland
Distributors

PROVED . . . AND IMPROVED

MIDLAND Diaphragm Type Vacuum HY-Power has been proved superior in over seven year's use on hundreds of thousands of vehicles.

Now . . . the new, improved Midland Vacuum Hy-Power offers:

Improved performance
Greater capacity
Increased line pressure
Approximately same over-all size
Mounting brackets front and rear
Lighter weight

EVERY DAY more and more trucks and trailers are being equipped with Midland Power Brakes.

GO MIDLAND

AND STOP SAFELY!

BACHARACH DIESEL TESTERS and SERVICE TOOLS



Compression Tester

Compression Tester

Especially designed for Diesel engines. Reads up to 800 psi. Motorite Tester is easy to connect to any make and model of Diesel engine merely by removing the nozzle or injector and installing the proper Motorite Adapter in its place. Shown at left is Motorite Tester with "Universal" Style Adapter D-505 which is adjustable to serve more than 100 different makes and types of Diesel engines. Carrying Case has room for 4 additional adapters. A large assortment of adapters is regularly carried in stock.

Send for Bulletin 643



Injector Tube Reamer Set

Nozzle Cleaning Tools

These cleaning tools are available in different assortments made up in accordance with engine builders' specifications. Included are cleaning needles, twist drills, pin vises, reamers, brushes, lapping blocks, lapping compounds and other specially designed cleaning tools. Each assortment is furnished as a completely packaged unit. For information on any specific assortment, give make of engine and brand name of fuel injection nozzle.

Send for Bulletin 631



Injector Body Vise

Injector Nut Tip Seat Reamer

Cylinder Liner Remover

Nozzle and Injector Testers

Equipment is available in a self-contained "Universal" assembly for testing American Bosch nozzles as well as Cummins and GM Injectors as shown in the illustration below, or may be purchased selectively for testing a particular type or related group of nozzles or injectors. This equipment meets the long felt need for compact, simple and economical testing means for field and shop use. It is easy to handle, making it ideally suited for field service trucks and temporary shops; yet it has the rigidity and stamina to stand up under continuous service duties of large repair shops and service centers rebuilding nozzles or injectors in quantity. Each group assembly has been engineered to meet fully the requirements necessary for testing the particular nozzles or injectors in accordance with manufacturer's recommendation.

Send for Bulletin 630-48

GM "71" Service Tools

A complete line of tools essential for specialized service operations on GM "71" Diesel Engines. Each tool has been engineered to perform a specific service job which can not be done properly with general shop equipment. These tools provide servicemen with dependable and accurate means to service GM "71" Diesels quickly and efficiently in accordance with the manufacturer's recommendations.

Send for Tool Cat. 52

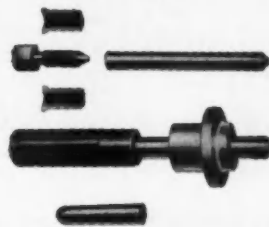


Nozzle Cleaning Set

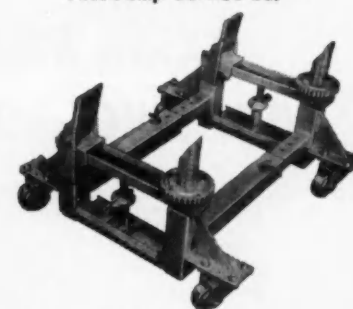


Valve Seat Insert Remover

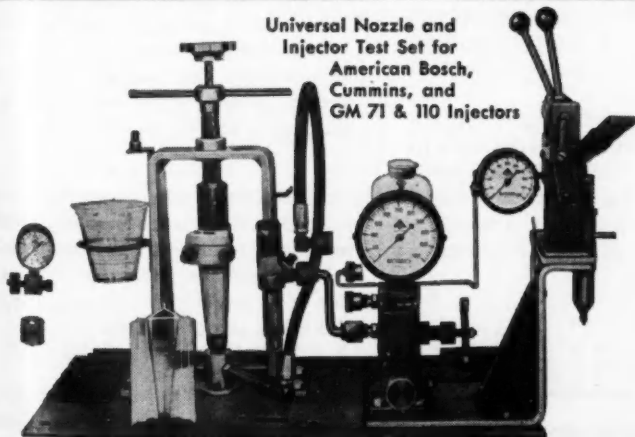
Nozzle and Injector Lapping Block



Fuel Pump Service Set



Engine Dolly for GM "71" Diesel Coach Power Plants



Universal Nozzle and Injector Test Set for American Bosch, Cummins, and GM 71 & 110 Injectors

The equipment shown on this page can be obtained from your jobber.



BACHARACH INDUSTRIAL INSTRUMENT CO.
7301 PENN AVE., PITTSBURGH 8, PA.

MAIL THIS COUPON NOW

GM-3a

Bacharach Industrial Instrument Co., 7301 Penn Ave., Pittsburgh 8, Pa.

☐ Send quotation on the following equipment:

Send copies of literature checked:

☐ BUL. 643 ☐ BUL. 631 ☐ BUL. 630-48 ☐ CAT. 52

Name _____

Company _____

Street _____

City and State _____



DREIKORN GETS TWO AND A HALF EXTRA MILES PER GALLON WITH TRUCK BODIES OF ALUMINUM

Million-mile operational records for Dreikorn's Bakery, Inc., Holyoke, Mass., show that trucks with Olson Kurb-Side Aluminum Alloy Bodies averaged 11.6 miles per gallon compared with 9.1 for their steel-bodied trucks.

Yes, higher gas mileage is but one of the advantages gained with truck bodies of lightweight Alcoa Aluminum. Maintenance costs drop to rock bottom because aluminum defies corrosion and makes body repairs simple. Tires, relieved of useless dead weight, give added miles of wear. The Dreikorn saving for 20½ months is \$1,270 per truck.

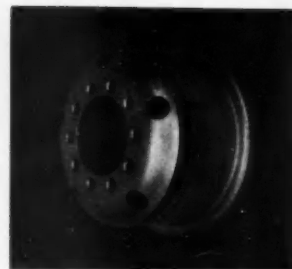
No matter what your hauling job, it will pay to make sure your

aluminum truck body is Alcoa Aluminum! To your body builder, Alcoa means range of sheets, plates, structural shapes and extrusions—and design helps that provide maximum strength with maximum economy... range of aluminum alloys that provides the right choice for every job... production facilities and knowledge that pioneered the first aluminum bodies and are still pioneering with the latest.

To you, Alcoa means lighter, fuel-saving truck bodies that cost less to maintain. A call to your Alcoa sales engineer will bring you all the facts. Aluminum Company of America, 1876-H Alcoa Building, Pittsburgh 19, Pennsylvania.

Alcoa Aluminum

ALUMINUM COMPANY OF AMERICA



EXTRA PAYLOAD, TIRE MILEAGE with ALCOA FORGED DISC WHEELS

LIGHTWEIGHT: Alcoa Forged Aluminum Disc Wheels weigh 32 to 50 pounds less per wheel than corresponding steel wheels. Your saving in unsprung weight means reduced wear and tear on chassis and tires.

TRUE-RUNNING: Alcoa Forged Aluminum Disc Wheels are precision-made, machined to close tolerances. Results—better balance, truer running qualities. You get easier steering, longer tire life, a smoother ride.

RAPID HEAT DISSIPATION: Tire temperatures are kept lower because one-piece Alcoa Forged Aluminum Disc Wheels conduct heat rapidly away from tires. Result—tires run cooler, give much greater mileage.

His car's not ready
and there's no air
to finish the job

What we need
is a new Westinghouse
Air Compressor



MAYBE the compressor's too small for all the equipment to which it must supply air . . . maybe it's just worn out. Whatever the cause, the old compressor is responsible for an unhappy customer.

You can prevent situations like this with a new Westinghouse Air Compressor. From the wide range of models available, you can select one with adequate capacity for all your present air-operated equipment and some to spare for new tools you may add.

Years and years of dependable service are built into Westinghouse Air Compressors through such exclusive Westinghouse features as *low oil level protection* that keeps the compressor from pumping air unless oil is at the proper level, the *positive starting unloader* that prevents loading until rated motor speed is attained, and *controlled pressure lubrication*. They are only a few of the features that put sturdy, reliable Westinghouse Air Compressors in a class by themselves.

Get full information from the Westinghouse Air Compressor dealer listed in the classified section of your telephone directory. When you need service, your dealer is always available.



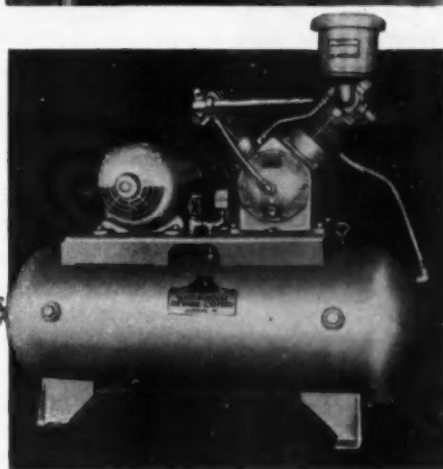
Westinghouse Air Brake COMPANY

INDUSTRIAL PRODUCTS DIVISION

WILMERDING, PENNA.

Factory Branch: EMERYVILLE, CALIF. Distributors throughout the United States... Consult your Classified Directory. Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario.

COMMERCIAL CAR JOURNAL, August, 1953



INSTALL THIS DEPENDABLE WESTINGHOUSE "Y" AIR COMPRESSOR

Whether your air requirements are large or small, there's a Westinghouse "Y" in the proper size to handle the job. These two-stage, two-cylinder compressors are available in sizes from 1½ hp with 7.4 c.f.m. displacement up to the big 15 hp model with 68 c.f.m. displacement. They'll give you high pressure for the jobs that require it, and, with addition of a Westinghouse Reducing Valve, fixed low pressure for jobs like spraying or polishing.



CHANGE TO WOLF'S HEAD HEAVY DUTY OIL

Keep your profits up . . . repair costs down . . . by giving your fleet the complete protection of WOLF'S HEAD. It keeps engine parts clean and cool . . . won't break down or burn away under the hottest, hardest driving conditions.

WOLF'S HEAD Heavy Duty Oil—100% Pure Pennsylvania—meets *every* requirement for severe heavy duty service. It provides superior film strength, thorough dispersancy, high detergency and complete protection against corrosive acids, rust and oxidation. It is approved by General Motors, Caterpillar, and under U. S. Army Specifi-

cations MIL-0-2104. And it keeps oil consumption to a minimum.

WOLF'S HEAD Laboratory Control Plan—free and without obligation—gives you the specific recommendation for each fleet unit, based on analysis of crankcase oil. Helps establish correct drain periods, conserves engine life and keeps your trucks on the road. Write for information.

FREE! "RULES OF THE ROAD" Folder. Contains complete driving information, traffic rules, speed laws for all states. Give them to your drivers.



WOLF'S HEAD OIL REFINING CO., INC., OIL CITY, PA., NEW YORK 10, N. Y.

WOLF'S HEAD

MOTOR OIL AND LUBES

100% Pure Pennsylvania
Scientifically Fortified

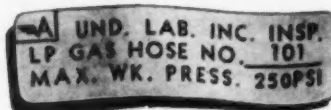


Member, Penna. Grade
Crude Oil Association

The First Butane-Propane Hose Listed by Underwriters' Laboratories



This Important Label Tells the Story!



Scientific tests were conducted by Underwriters' Laboratories to determine "the strength and durability of the hose, and resistance of the tube to action of the liquefied propane and butane to which it will be subjected in service." Aeroquip 1533-type Hose met every requirement and was the first L.P.G. Hose authorized to carry the Underwriters' Laboratories label.



AEROQUIP HOSE AND FITTINGS ARE MATCHED FOR GUARANTEED PERFORMANCE

Now you can take advantage of the cost-cutting, time-saving features of Aeroquip Hose for L.P.G. applications. Now you can make hose lines as needed by cutting bulk hose to required length and attaching the reusable fittings. It's quick, easy and it simplifies inventory problems. U.L. listed Aeroquip 1533-type hose is recommended for use on engines and other "fixed" in-

stallations. It is exceptionally light, flexible, and strong. A braided wire reinforcing layer within the hose provides hundreds of points of contact with the hose fitting thus assuring safe conductivity of static electricity. Also available is Aeroquip 1536-type hose which is rubber covered to resist the effects of abrasion in bulk handling applications. 1536-type hose is now being tested by U.L.

Aeroquip

AEROQUIP CORPORATION, JACKSON, MICHIGAN

SALES OFFICES: BURBANK, CALIF. • DAYTON, OHIO • HAGERSTOWN, MD. • HIGH POINT, N. C. • MIAMI SPRINGS, FLA.
MINNEAPOLIS, MINN. • PORTLAND, ORE. • WICHITA, KAN. • TORONTO, CANADA

AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

it's YOUR
profit-move
with **AUSCO**



True, selling jacks isn't as simple as playing checkers. However, you still have to keep one jump ahead of the other fellow.

Selecting the right jack to fit your servicing needs also is a move that requires more thought than deciding which men to maneuver on the checkerboard!

Here's why we say, "whether you sell jacks or use them, make YOUR *Profit-Move* with AUSCO":

COMPETITIVELY PRICED—investigate AUSCO's low prices that keep you a jump ahead of competition.

HIGHEST QUALITY—every AUSCO Jack is made 100% by AUSCO...from castings to finely-machined hydraulic pistons...in the world's most modern jack plants...backed by multi-million jack-building experience for America's foremost car and truck factories.

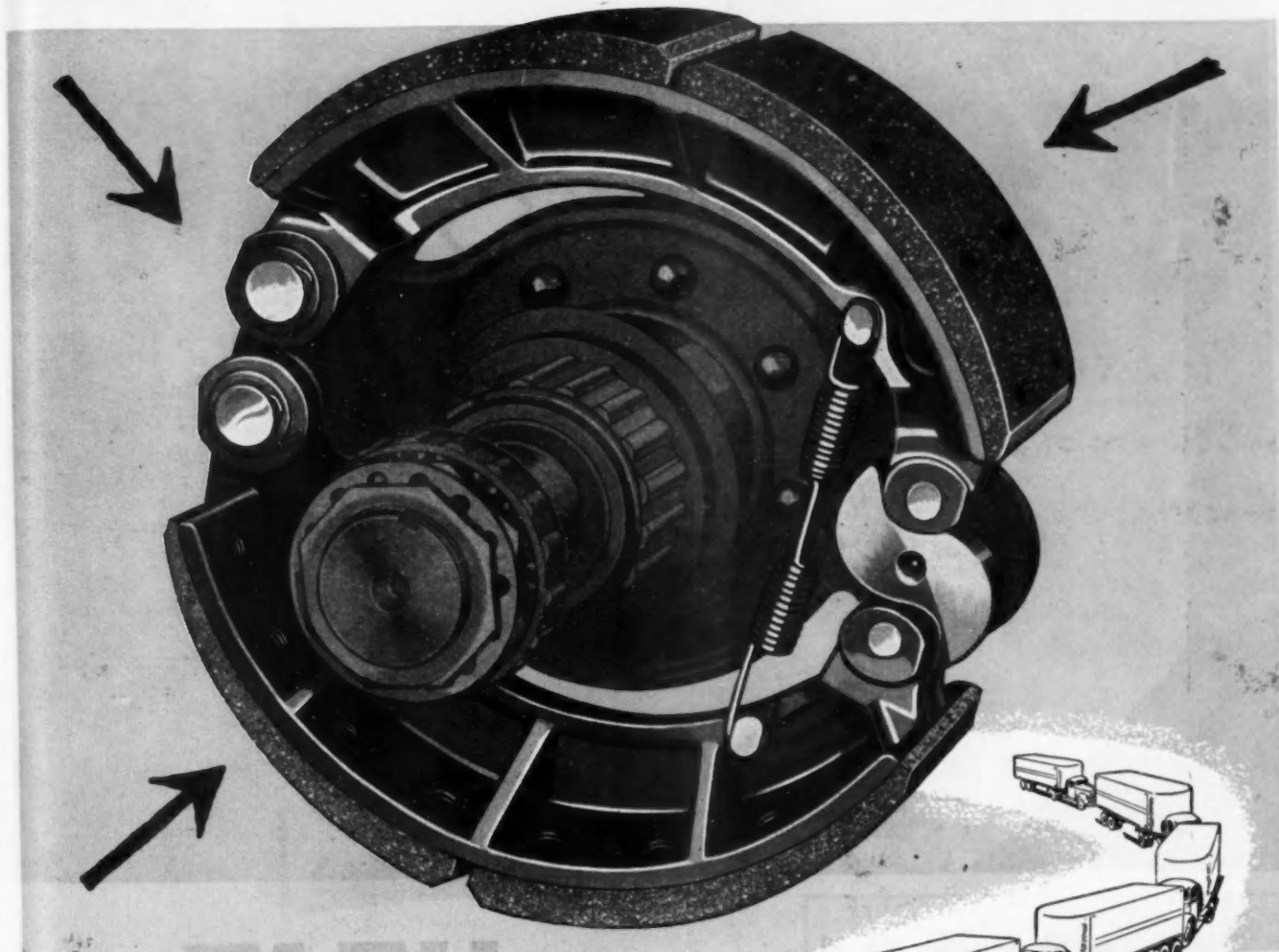
COMPLETE LINE—hydraulic or mechanical, re-sale or service use, $\frac{3}{4}$ to 20-ton capacities...and a full line of hydraulics with extra-high lifting range.

UNCONDITIONAL PRODUCT WARRANTY—this applies to every jack that comes off an Ausco assembly line.

Look over the formidable array of Ausco Jacks shown here, then make your Profit-Move with Ausco...start by sending for your free copy of Ausco's 1953 Jack Catalog, No. 153A, which contains many other models not pictured here.

AUTO SPECIALTIES MFG. CO., Dept. CC-8, St. Joseph, Mich. Other Plants: Benton Harbor and Hartford, Mich., Windsor, Ont., Canada

Fleet Safety starts HERE!



All that stands between your equipment and costly accident is $\frac{1}{4}$ " to $\frac{3}{8}$ " of brake lining thickness.

Important as driver training and preventive maintenance programs are, when your vehicle is in a potential accident situation, you must still be equipped with a top quality brake lining.

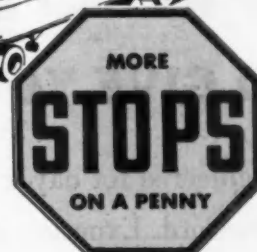
That's why leading heavy-duty operators make American Brakeblok their first choice. They know it is completely dependable throughout its longer lining life. Wears slowly, evenly. Protects drums. Keeps maintenance costs low.

Give your fleet this same, sure protection. Order American Brakeblok from your N.A.P.A. jobber, today.

★ ★ ★

Brake problems?—An American Brakeblok Service Engr. will help you solve them. Write American Brakeblok.

Copyright 1953, American Brake Shoe Company



American Brakeblok



THE SAFETY BRAKE LINING

AMERICAN BRAKEBLOK DIVISION
DETROIT 9, MICHIGAN

Plants in: Detroit, Michigan; Winchester, Virginia; Lindsay, Ontario; GII, France



RAYON TAKES THE **HEAT** OFF! ...TO GIVE YOU A COOL SAVING ON UPKEEP

Engineered for day-in, day-out heavy trucking, today's rugged tires use rayon in the cord. Experience has proved rayon cord makes a tough, cool-running tire.

Low initial cost plus economy of operation are important reasons why 9 out of 10 of the country's trucks and buses are rolling on tires made with rayon. Month after month, mile after mile, rayon's unique qualities take the heat off your maintenance costs.

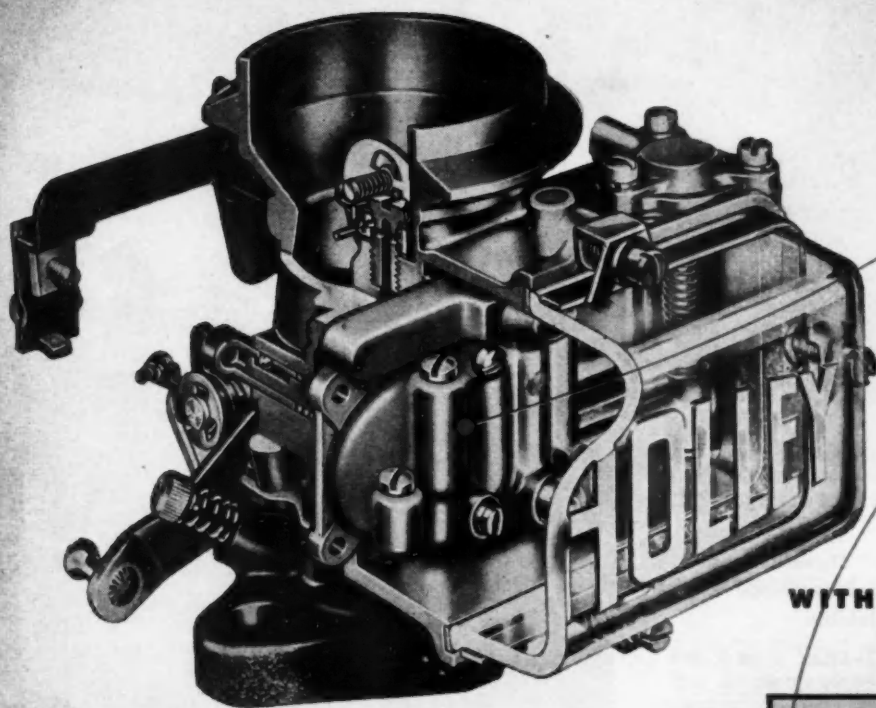
Enka is a major producer of Rayon for tires...

ENKA RAYON FOR CORD IN TIRES

American Enka Corporation, 206 Madison Avenue, New York 16, N. Y.

THE NEW CARBURETOR FOR LIGHT TRUCKS

The Holley Visi-Flo

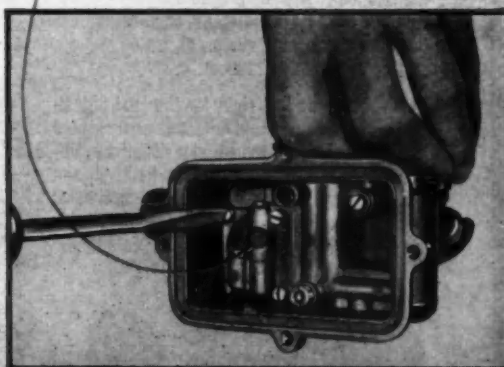


WITH THE REPLACEABLE
METERING UNIT

In the past, service departments of car and truck dealers have had to maintain cumbersome stocks of tiny carburetor parts. Vehicle manufacturers have urged servicemen not to patch up old carburetors or to replace them with rebuilt models but to buy and install new factory-built carburetors. Owners of cars in the low priced field have protested that it will cost too much.

The Holley Visi-Flo will change that!

Servicing the Holley Visi-Flo requires just four simple steps. For the first time, all metering parts are contained in one complete assembly which can be easily, quickly, and inexpensively replaced. The Visi-Flo is Holley Model 1904. It is a single downdraft carburetor for 80-120 H.P. engines.



FOR MORE THAN HALF A CENTURY—ORIGINAL
EQUIPMENT MANUFACTURERS FOR THE
AUTOMOTIVE INDUSTRY

HOLLEY

Carburetor Co.

DETROIT 4, MICHIGAN

114



"I thought he was waving me on!"



Signal-Stat Signals assure maximum protection for your drivers, your vehicles, and your profits. They promote safe driving habits and improve your fleet accident record. That means your P. L. and P. D. insurance rates are lower.

Signal-Stat Class A—Type 1 Signal Lamps
Approved and Legal in all 48 States
and District of Columbia

They exceed SAE requirements! Over 14 square inches of open illuminated lens area. Signal-Stat Signals are signaleered. They combine the best in materials, engineering, design, and construction: are shockproof, rustproof, tested and approved. Illustrated catalog available on request.

This reflector is just right for the job! Signal-Stat parabolic aluminum reflectors are designed to make the most of the advantages of scientifically fluted Lucite molded lenses. Reflector and lens combine to create a beamed pattern of light which minimizes glare and assures maximum visibility night or day under any conditions.



"Sure, he had his hand out. But the way he was waving it around, I thought he wanted me to pass. So I started by. Then he cut over and raked me.

"If that rig had directional signals, a guy would know what he was going to do. My boss wouldn't put a truck on the road without signals because he knows with signals he protects his drivers and trucks and cuts his insurance costs, too."



Signal-Stat

CORPORATION

SIGNAL STAT BUILDING
523-539 Kent Ave., Brooklyn 11, N. Y.

with **AUTOPULSE**

Experience

is your best evidence of savings



Check with prominent truck and fleet owners all over America and they will tell you that when their trucks and buses are equipped with Autopulse Electric Fuel Pumps they actually save **THREE WAYS**:

1. by avoiding roadside delays due to vapor lock.
2. by saving on labor overtime when vehicles operate on schedule.
3. by saving on the amount of money tied up on replacement pump inventories, since only one Autopulse basic model is needed to fit all vehicles.

THE AUTOPULSE ELECTRIC FUEL PUMP:

1. gives instant starts in extreme hot or cold weather.
2. operates efficiently at any temperature from 90° below zero to point of evaporation of fuel.
3. is truly the universal fuel pump, for one basic model fits all vehicles.
4. All parts are replaceable in the field.
5. is easy to install — instructions accompany every pump package.
6. sold by authorized distributors all over the world — parts and service and exchange units available everywhere.

A dependable motor fuel supply is your best assurance that you can keep every bus or truck on the job — avoid costly delays and roadside repairs. AUTOPULSE has been road-tested for more than a quarter of a century — on trucks, buses and passenger cars Autopulse Electric Fuel Pumps have delivered millions of miles of economical and dependable performance.

*rigid quality and production controls
insure you of an "a-no. 1" pump*

AUTOPULSE *the heart of your motor*

AUTOPULSE CORPORATION 218 E. Dowland St., Ludington, Mich.



4 Powerful Reasons Why **CHEVROLET** ADVANCE- DESIGN **TRUCKS** will save money on your job . . .

EXTRA THRIFTY POWER! The improved Loadmaster engine in heavy-duty models has new high-compression ratio (7.1 to 1) to squeeze more power . . . more work out of every drop of fuel. In light- and medium-duty models, Chevrolet's advanced Thriftmaster engine delivers top-notch operating economy. Both give you the extra-long life and day-in, day-out dependability for which Chevrolet valve-in-head truck engines are famous.

ENGINEERED FOR THE JOB! Whatever you haul . . . wherever you haul it, your Chevrolet truck will be factory-matched to fit your requirements. That means you get the *right* power and the *right* chassis units throughout—tires, axles, springs and clutch—to suit your roads and loads. It means a truck that will do your job more easily . . . more efficiently.

MORE RUGGEDLY BUILT! New Chevrolet trucks are stronger and sturdier than ever before. Frames, for example, are heavier and more rigid. This extra, built-in stamina means miles added to truck life and dollars *subtracted* from upkeep costs! Another important "plus" you get with Chevrolet trucks!

AND THEY LIST FOR LESS! No other truck offers all of Chevrolet's advance-design features . . . all of Chevrolet's money-saving advantages. Yet Chevrolet is the lowest priced truck line of all! See your Chevrolet Dealer. . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

TWO GREAT VALVE-IN-HEAD ENGINES—the Loadmaster or the Thriftmaster—to give you greater power per gallon, lower cost per load. **POWER-JET CARBURETOR**—for smooth, quick acceleration response. **DIAPHRAGM SPRING CLUTCH**—for easy-action engagement. **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **HYPOID REAR AXLE**—for dependability and long life. **TORQUE-ACTION BRAKES**—on light-duty and medium-duty models and on front of heavy-duty models. **TWIN-ACTION REAR BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—for greater holding ability on heavy-duty models. **CAB SEAT**—with double deck springs for complete riding comfort. **VENTIPANES**—for improved cab ventilation. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—for easier handling. **UNIT-DESIGNED BODIES**—for greater load protection. **ADVANCE-DESIGN STYLING**—for increased comfort and modern appearance.



DESIGN

ENGINES—
faster—to
on, lower
URETOR—
response.
for easy-
RO-MESH
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ODIES—
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comfort

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ust, 1953



Special FOR CHEVROLET!

- Revolutionary Hastings Aero-type Shrouded Spark Plugs, specially engineered for Chevrolet service
- Specifically designed for replacement in Chevrolet engines with some mileage
- Special gap setting for good idling—no adjustment required at installation
- Special heat range for extra resistance to fouling, yet providing excellent high-speed performance
- New package of 6 for easier stocking and handling—no left-overs
- Shrouded construction makes cleaning easy—assures excellent service after several cleanings
- Proved to cost less, mile for mile, for full-range performance in any Chevrolet car or light truck

Here's a *replacement* spark plug in every sense of the word—a set actually engineered to the operating conditions found in a particular engine with some miles on it.

Hastings offers many specific advantages for all make and model engines. This new shrouded construction takes the electrodes out of the path of the hot flame sweep—and provides *two* ground electrodes, set to the side, for easier cleaning. There's an improved H. T. Aluminum Oxide insulator, too, and many other Aero-type features for premium performance and longer life in any type of service.

Write for illustrated catalog. Dept. C, Spark Plug Division, Hastings Manufacturing Co., Hastings, Mich. (Spark Plugs, Piston Rings, Oil Filters, Casite, Drout)



**A PREMIUM PLUG FOR
PREMIUM PERFORMANCE**

Get the Extra Margin of Safety That Only U.S.I. Gives You!

— and at no extra cost!

U.S.I. PERMANENT ANTI-FREEZE

— world's safest anti-freeze —

gives you an *extra margin of safety* for these good reasons:
contains *more* ethylene glycol, acknowledged the world's best
anti-freeze agent • provides world's best inhibiting action,
with Special Inhibitors, a top trade secret; protects *all 7*
metals in cooling system, stops rust, corrosion, foaming,
clogging • gives uninterrupted protection from Fall till Spring
on one filling, because it will neither freeze nor evaporate
in any weather, cold or hot • guaranteed by U.S.I.



U.S.I.'s SUPER PYRO ANTI-FREEZE

— best economy anti-freeze —

gives you an *extra margin of safety* for these good reasons:
contains anti-freeze agent that gives one third more pro-
tection per quart than ethonol • contains top quality rust
and corrosion inhibitors that protect *all 7* metals in cooling
system • proven in long use — year after year commercial
operators large and small reorder this long-time best-seller!
• guaranteed by U.S.I.



Experienced commercial operators know:

You Can Rely on U.S.I.

— making finer anti-freezes since 1907

U. S. INDUSTRIAL CHEMICALS COMPANY • Division of National Distillers Products Corporation

ALL-W

You don't
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All-Whee
mile-a-mi
the rough
up steep

Only M
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and 6-w
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literature

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*you go all the way
with these great trucks!*

ALL-WHEEL-DRIVE LUGGING ABILITY — EXPRESS-SPEED HIGHWAY PERFORMANCE

You don't have to sacrifice fast highway performance to get dependable off-road lugging ability—not when you put Marmon-Herrington All-Wheel-Drive Fords to work. On good highways, you'll roll at a mile-a-minute clip. Off the road, you'll pack peak payloads across the roughest kind of country—through deep mud, sand and snow, up steep hills and mountain grades.

Only Marmon-Herrington All-Wheel-Drive Fords give you this kind of high-speed, dual-purpose performance—yet actually cost you less than other multiple-drive trucks. Over 60 4-wheel-drive and 6-wheel-drive models, including 15 with cab forward. Gross vehicle weights from 5,300 to 35,000 pounds.

Investigate these high-performing trucks. Send for descriptive literature and name of nearest Marmon-Herrington dealer.

MARMON-HERRINGTON COMPANY, INC.
1521 West Washington Street • Indianapolis 7, Indiana

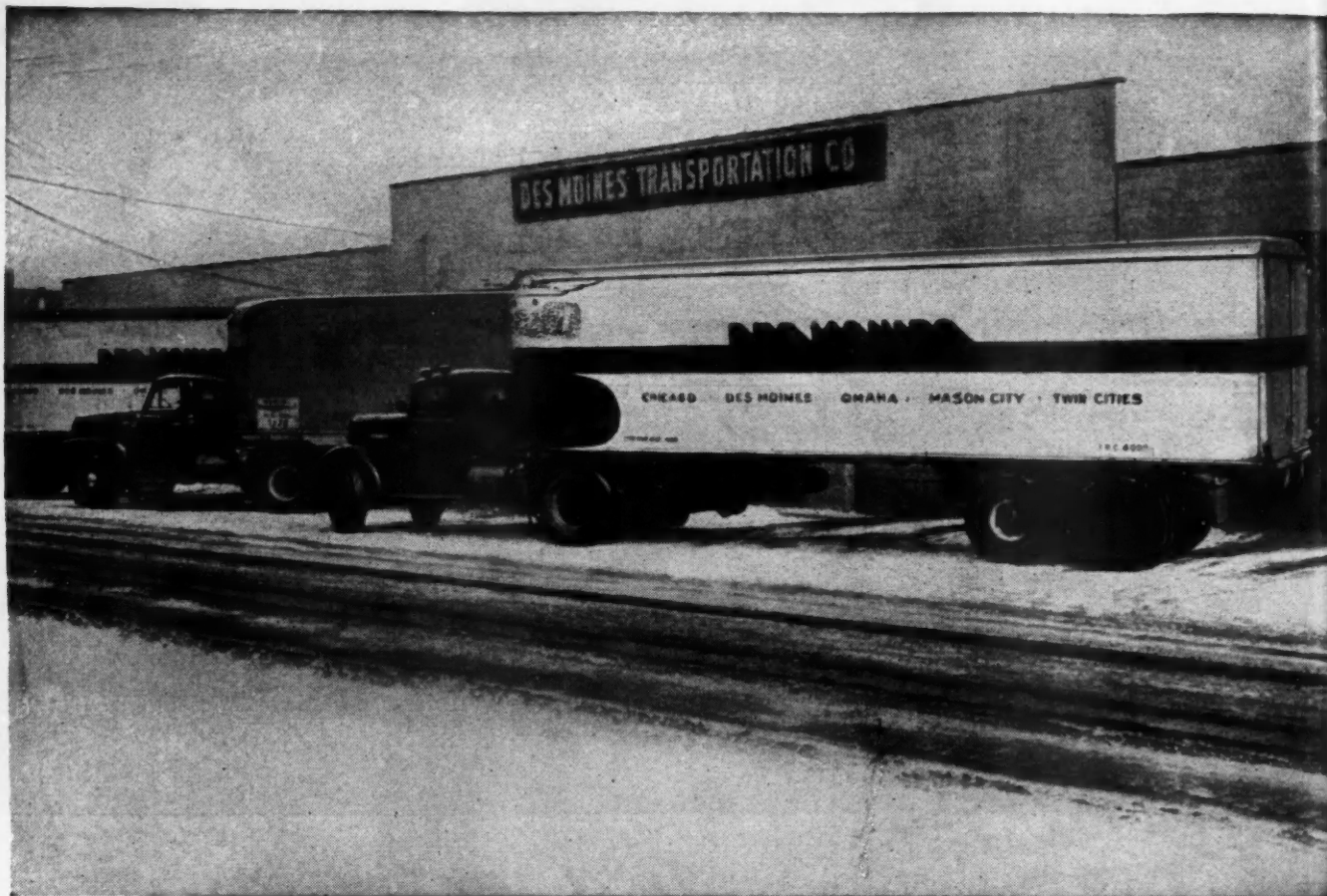
**SERVICE AVAILABLE AT FORD
DEALERS EVERYWHERE...**



Marmon-Herrington All-Wheel-Drive Fords are, for the most part, built of standard Ford Parts. Consequently, fast, efficient, low-cost maintenance and repair service is available at Ford dealers everywhere. When, occasionally, special parts are required, they are quickly obtainable through Marmon-Herrington distributors, conveniently located in principal cities the world over.

MARMON-HERRINGTON
All-Wheel-Drive

FORDS



**"Armstrong's cost less, wear longer
—my figures prove it!"**

A. W. HOBBS
Des Moines Transportation Co.
Des Moines, Iowa



"IN this business overhead can eat away your profits—and business—before you know it. That's why I watch tire costs and mileage records. I just have to get my money's worth.

"It's too risky to take chances on tires or tire costs these days.

"My figures prove Armstrongs shape up better in every way—dollar for dollar, mile for mile.

"With Armstrong all around I know—by actual experience—that I am getting more miles per dollar.

"You can sell me Armstrongs any time, mister!"

Armstrong Rubber Co., West Haven 16, Conn., Norwalk, Conn., Natchez, Miss., Des Moines, Iowa, 601 Second St., San Francisco, Calif. Export: 20 East 50th St., New York 22.

ARMSTRONG TRUCK TIRES

Since 1912, millions of tires for cars, trucks and tractors have proved Armstrong's leadership in value.

Give your drivers the safety and comfort of

SOLEX Heat-Absorbing Safety Glass



GROWING in popularity every day, Solex Heat-Absorbing Safety Glass has been called one of the most significant contributions to operating safety and driver comfort in recent years.

The even, green tint of Solex reduces the glare from bright sunlight, thus helping to give the driver better vision and cutting down on eyestrain and fatigue. Solex transmits far less heat from the sun, too, keeping the interior of the cab cooler and more

comfortable at the same time.

The safety factor alone more than justifies the use of Solex, but there's a great added advantage in the way it keeps drivers more comfortable and thus more efficient.

Ask your glass dealer for Solex for glass replacement in your present vehicles . . . specify it in any new equipment you order. Look for the Solex trade-mark on every piece, along with the familiar name of the particular type of Pittsburgh Safety

Glass — Duplate, Duolite or Hercu-lite. Pittsburgh Plate Glass Company, Room 3317, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.



*"the best glass
under the sun!"*



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

Punishment Plus!

TRAILER FLOORS CAN TAKE IT WITH Stran-Steel® Flooring

The ability to stand up under heavy impact loads makes Stran-Steel Flooring the favorite with T. T. Lloyd, vice president of Albion Malleable Iron Co., Albion, Mich. Here's what he recently wrote, in part:

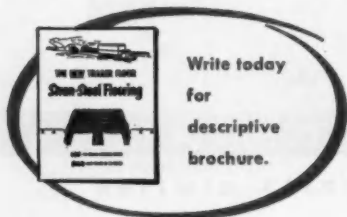
"... we are particularly pleased with the Stran-Steel Flooring in our fleet of shipping trailers. The result is increased durability with less dead weight. The 13-gage Stran-Steel Flooring capably withstands

the impact of dumping ton lift truck loads of castings from a height of about four feet. Since our method of loading subjects trailer side walls to abnormal abuse, we have applied 16-gage Stran-Steel Flooring to the walls with excellent results... units have been in constant operation for eight months with no appreciable wear of floors or walls."



Castings weighing 38 pounds each are dumped from a height of about four feet into the Stran-Steel Flooring of this trailer, one of a fleet of seven so equipped and operated by Albion Malleable Iron Company.

Lift truck weighing 8800 pounds with load moves differential carrier castings into trailer. Note how Stran-Steel Flooring has been used along sides, as well as floor, for added protection.



GREAT LAKES STEEL CORPORATION
Stran-Steel Division—Ecorse, Detroit 29, Michigan

NATIONAL STEEL CORPORATION

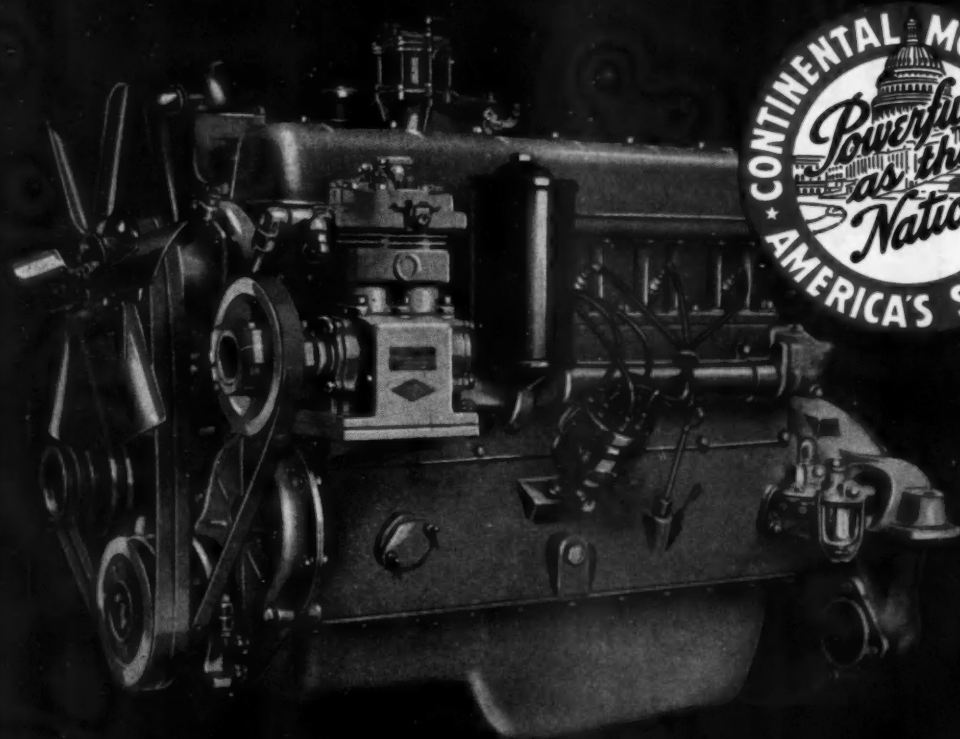


WHEN ORDERING
NEW EQUIPMENT
SPECIFY STRAN-STEEL
FLOORING

Engineered to Out-Perform

...and BUILT TO LAST

• CONTINENTAL •
RED SEAL POWER



T-6427 TRANSPORTATION ENGINE.
163 BARE ENGINE HORSEPOWER AT 2600 R.P.M.

For more than 50 years, Continental has been engineering power plants to do more useful work per pound of engine weight, and building them to run longer with less time out for repairs. Materials flow more steadily and at lower ton-

mile cost, when they move to the job in trucks with dependable Red Seal power. And the range of the Red Seal line—28 basic models, Diesel and gasoline—assures exactly the right engine for every commercial transport job.

Continental Motors Corporation

MUSKEGON, MICHIGAN

1819 BROADWAY, NEW YORK 23, NEW YORK • 6210 CEDAR SPRINGS ROAD, DALLAS 9, TEXAS • 3817 S. SANTA FE AVE., LOS ANGELES 58, CALIF.

910 S. BOSTON ST., ROOM 1008, TULSA, OKLA. • 1252 OAKLEIGH DRIVE, EAST POINT (ATLANTA) GA.

CAPT. *EASY* Says:

WEATHERHEAD
MAKES THE COMPLETE
LINE WITH THE RIGHT PART
FOR EVERY JOB!



HANDLE THE *EASY* LINE!

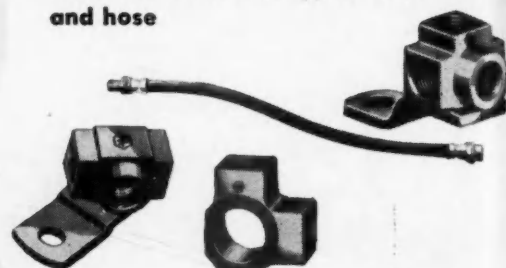


No more problems with hard-to-get parts when you carry WEATHERHEAD—the complete line. Get all the facts in Catalog J-103. Write STANDARD PARTS DIVISION, THE WEATHERHEAD COMPANY, Dept. T, 300 East 131st Street, Cleveland 8, Ohio.

Over 1500 Original Equipm

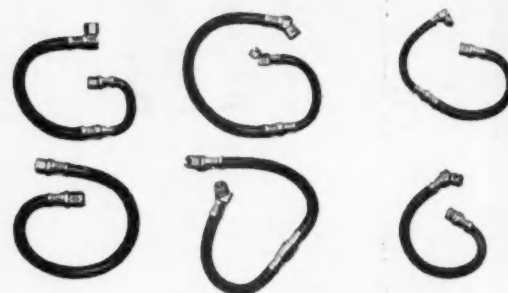
***EASY* BRAKE JOBS**

with 107 sizes and types of brake fittings and hose



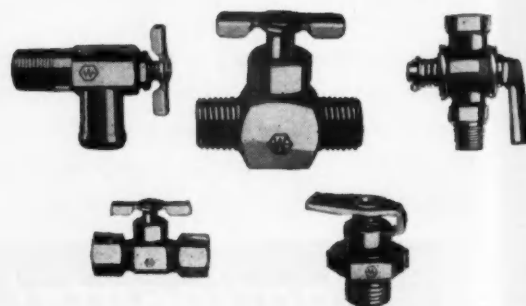
***EASY* POWER STEERING REPLACEMENTS**

with 11 different types of hose assemblies



***EASY* DRAIN AND SHUTOFF COCK REPLACEMENTS**

with 91 different types and sizes



Original Equipment Automotive items for **EASY** replacements

EASY DASH CONTROL REPLACEMENTS

from assortment of 24 styles and colors



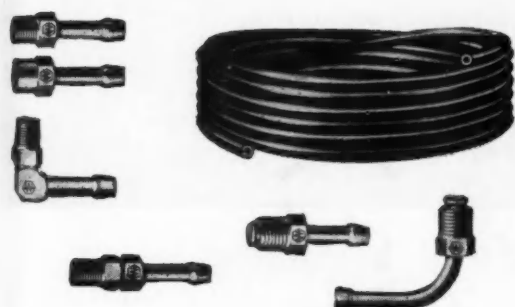
EASY FUEL LINE REPLACEMENTS

with 64 different assemblies to fit any car



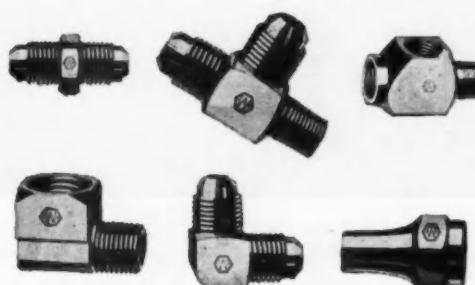
EASY WINDOW LIFT JOBS

with bulk hose and 7 different types of fittings



EASY TUBE FITTING JOBS

with 405 sizes and types of fittings



EASY HOSE LINE REPLACEMENTS

with 85 sizes and types of heavy-duty hose, reusable ends and quick attachable fittings



EASY OIL FILTER LINE REPLACEMENTS

with 30 different sizes and types of assemblies



The Mark of Quality

WEATHERHEAD

ON EVERY CAR!



... Griffin Leads In Safety Lighting

● Griffin gives you the answer to all safety lighting needs. Whether it's stop lamps, turn signals, warning signals, clearance and marker lamps, mirrors—you name it, Griffin makes it—better!

Pick up a Griffin lamp—look at it. You'll find it's heavier, sturdier, tougher, able to stand

up under years of rugged fleet wear. Every Griffin lamp is fleet engineered for longer life, trouble-free service—and to keep maintenance and replacement costs to a minimum.

See your Griffin jobber now. You'll find it pays to concentrate on Griffin—the complete line engineered for fleet use, alone.

THE GRIFFIN LAMP COMPANY • HAMILTON, OHIO

Model No. 200 Whopper stop lamp, 7 1/4" diam. 4" depth. Finished in black enamel. Stainless steel door. Lens color red or amber.

Model No. 550 New class A, Type 1, double faced turn signal. Only 2" deep—needs no reflector. Throws an amber signal forward and red signal to the rear with one bulb and a single set of wires.

Model No. 360 Emergency warning blinker. A high intensity warning blinker with 360° lens. Visible all around the horizon in brilliant sunlight or total darkness.



If "pull" is answer. G longer . . . maintenance stops and releases for today.

CAR WOOD
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INDUSTRIES

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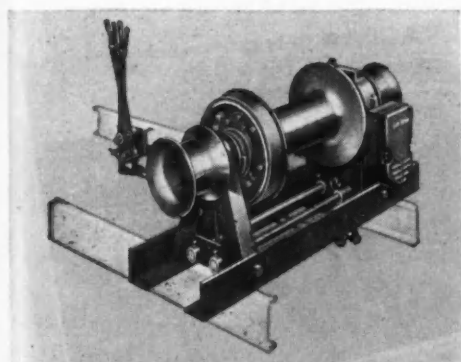
WHATEVER YOU HAUL



HAUL MORE

with

GarWood



If "pull" is your problem, a Gar Wood winch is the answer. Gar Wood winches are tougher . . . last longer . . . are safer to operate . . . require less maintenance. Self-energizing, automatic safety brake stops and holds any load up to winch capacity yet releases fully without drag. Write for information today.

It's True!

Whatever you haul, you can haul more in Gar Wood Bodies without exceeding legal load limits. Gar Wood Bodies and Hoists are designed and built to eliminate dead weight without affecting vital strength and rigidity. This combination of minimum weight with maximum strength and rigidity assures extra payload—and extra profits—on every trip.

Reinforced tailgate construction with forged steel tailgate pins and hooks saves dead weight yet puts extra strength where it is needed to withstand load concentrations when dumping or spreading. Rear corner posts are extra strong to withstand shock loads and maintain permanent alignment. Body panels are reinforced with V-type braces to add extra strength without excessive weight.

There's a Gar Wood Body and Hoist Combination in every type and capacity to meet your every operating requirement. Find out today how you can put more pay in your payloads by putting Gar Wood Bodies and Hoists to work on your hauling job.

Send for your **FREE** copy
of this new Gar Wood
line catalog **TODAY!**



CUSTOMER SERVICE DEPT.
GAR WOOD INDUSTRIES, INC.
36005 MAIN ST., WAYNE, MICH.

3H135

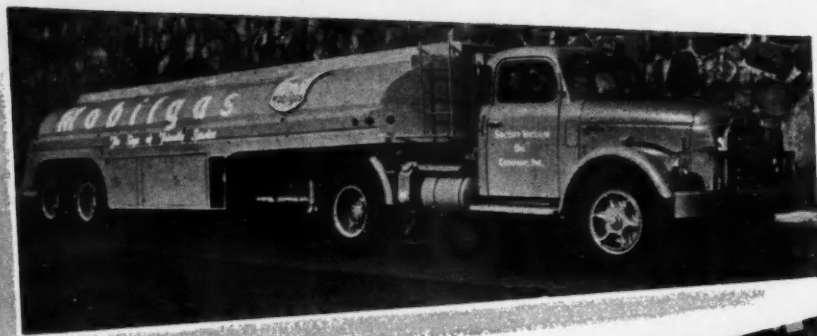
Please send me the new catalog W-120 E showing
Gar Wood truck equipment.

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

IR WOOD INDUSTRIES, INC.

WAYNE DIVISION • WAYNE, MICHIGAN

TRUCK EQUIPMENT: Dump Truck Bodies and Hoists, Winches and Cranes, Refuse Collection Bodies, Elevating End-Gates.



Why *famous fleets* choose **PUROLATOR**

SUPERINTENDENTS of these famous fleets agree that regular replacement of oil filter refills keeps operating expenses lower . . . and Purolators* do the job best!

Fleet experts such as these are guided by *results*, not claims. They have tested Purolators in hundreds of thousands of operating miles, and found them best by every standard. When they say there's no finer filter made than Purolator, they *know* what they're talking about!

Here are just a few reasons why Purolators are their best buy, and yours:

Up to ten times the effective filtering area of old-style filters.

Maximum Efficiency: Purolator Micronic* element traps particles down to *submicrons* small (.0000039 in.)!

Maximum Flow Rate: The amazing efficiency of the Purolator Micronic element assures highest filtration rates and long service life.

Will not remove or absorb additives: With Purolator Micronic filtration you keep *all* the oil quality you pay for!

Write for complete information on Purolators best for your own service. And remember . . . Purolator's Fleet Service Department is always ready to help you solve filtration problems—for a truck or a fleet!

*Reg. U.S. Pat. Off.



PUROLATOR PRODUCTS, INC.
Rahway, New Jersey and Toronto, Ontario, Canada
Factory Branch Offices: Chicago, Detroit, Los Angeles

PurOlator

THE WORLD'S  FINEST OIL FILTER



with **athletes and auto-mechanics**



CONTROL IS MIGHTY IMPORTANT . . .

You too can be a "big leaguer" in the automotive field and reduce nut running time 75% . . . without any special training! All you need is a CP Controllable Power Air Impact Wrench. It's the only automotive impact wrench that can be preset to run nuts and screws to uniform tightness . . . yet has that extra power when you need it.

That's not all! Short overall length, light weight, and detachable angle heads for those hard-to-reach spots are other "plus" features that all add to CP's time-saving and easy operation. Available in 1/2", 5/8", 1" and 1 1/4" bolt size models. Write for Bulletin 3029. *Chicago Pneumatic Tool Company, 8 East 44th Street, New York 17, N. Y.*



Chicago Pneumatic

AUTOMOTIVE SERVICE EQUIPMENT • AIR IMPACT WRENCHES • TRUCK JACKS • PNEU-DRAULIC PUMPS • FENDER IRONS

COMMERCIAL CAR JOURNAL, August, 1953

215

... Heating Dollars

Continued from Page 178

not sufficiently close as to blast hot air against cold walls or windows. Where several units are installed in a large area, they should be positioned so that their air streams will circulate completely around the inside perimeter of the area's walls, discharging warm air parallel to the exposed walls and to the rear of the unit ahead. In this way, the air discharged by one unit is picked up by the unit ahead and is rewarmed before it has time to cool.

The location of partitions which do not extend to the ceiling should be considered when planning the location of heating units. Each heater should be placed so that no great quantity of warm air will be deflected by the partitions. Heating units should never be located closer than 18 in. to any wall.

Opinion seems to be divided with regard to positioning of warm air registers. Many recognized authorities have for some time recommended that regis-

ters be placed near the floor, and when practicable, at such locations on inside walls as to direct the flow of warm air across or parallel to the outside walls, but not against occupants.

Yet high wall register installations have become increasingly numerous. Where this type of arrangement is necessary, it is recommended that register styles be selected to provide 15 to 20 degrees downward deflection to direct the warm air toward the floors.

Positioning also pays an important role in the proper functioning of thermostats. Since the purpose of the thermostat is to regulate the heating system so as to provide a desired temperature in the area, the air around the thermostat must be representative of the average temperature of the area. The thermostat, therefore, should not be exposed to draughts, open doors, excessive sunlight, hot lights, warm air streams or similar heat sources. It should be located in an open area, never in an out-of-the-way corner. Thermostats should be placed at least 2½ feet above the floor, and if mounted on an inside wall, should be insulated from the effects of a cold surface.

Regulation

ANY wisdom displayed in the selection and positioning of heating equipment will lose more than a little of its effectiveness unless good judgment is exercised in the operation of the heating system. All persons authorized to operate the system should be thoroughly familiar with proper handling methods before being permitted to use the controls. The operating manual provided by the manufacturer should be carefully studied by these persons, and should be promptly referred to whenever problems arise regarding the operation of the system.

If a night set-back policy is observed, the heat should be increased four to six hours in advance of the morning starting time, depending on weather conditions, in order that the over-night heat loss can be regained so that the building will be comfortable when employees begin work. If the building is used 16 hours per day, little fuel will be saved by setting the temperature lower during the off-hours.

END

Please Resume Reading Page 88

August Roundup

Continued from Page 62

months of this year showing an increase in the number of accidents as compared to the same period last year. The record looked like this: 5781 truck and bus accidents for the two months of this year as compared with 5768 in the two months of 1952.

ATA Foundation

Further industry support of the ATA Foundation, Inc., announced last month, was announced by Trailmobile, Inc. The company announced a contribution of \$50,000 to the Foundation for institutional advertising and promotion.

Copyright

Attention has been called to the fact that the term "Low Temperature Welding" used in the headline of the article appearing on page 78 of the July issue is a copyrighted phrase, the property of Eutectic Welding Alloy Corp. Readers will recall that the article was written by Mr. Phillips of this corporation.

National Truck Roadoo

Dates for the ATA National Truck Roadoo have been changed from Sept.

1953 Domestic Truck Factory Sales by G.V.W.*

| | 5,000 lb. and less | 5,001-10,000 | 10,001-14,000 | 14,001-16,000 | 16,001-19,500 | 19,501-26,000 | Over 26,000 | Total |
|-----------------------------|--------------------|--------------|---------------|---------------|---------------|---------------|-------------|---------|
| January..... | 47,234 | 19,101 | 3,669 | 12,622 | 3,344 | 8,271 | 3,638 | 97,879 |
| February..... | 40,616 | 16,600 | 3,067 | 11,068 | 3,409 | 7,621 | 3,811 | 86,212 |
| March..... | 55,910 | 22,796 | 5,888 | 19,354 | 4,776 | 9,067 | 4,550 | 122,043 |
| April..... | 51,743 | 23,352 | 5,078 | 17,700 | 4,287 | 8,200 | 4,461 | 114,821 |
| May..... | 39,635 | 14,428 | 2,729 | 10,788 | 3,982 | 7,461 | 3,440 | 82,463 |
| Total—Five Months—1953..... | 235,138 | 96,279 | 20,151 | 71,532 | 19,798 | 40,640 | 19,900 | 503,438 |
| Total—Five Months—1952..... | 172,119 | 87,671 | 24,283 | 84,435 | 18,985 | 44,400 | 20,484 | 452,357 |

* Automobile Manufacturers Association.

15-19 to Sept. 22-26. The place remains the same—the Minnesota State Fair Grounds, St. Paul-Minneapolis, Minn.

Announcement was also made that the U.S. Air Force would hold its National Motor Vehicle Roadoo at the same time and location as the ATA Roadoo. Forty Air Force drivers will compete.

Equipment Exhibit

September meeting of interest to fleetmen will be Truck Body and Equipment Assn.'s annual convention and exhibit to be held the 21, 22 and 23 of next month at the Hotel Sheraton-Gibson, Cincinnati, Ohio. Included will be a 50-booth display of the latest products, a tour of Trailmobile's Cincinnati plant and numerous panel discussions on industry questions.

Roads Cost Money

Preliminary report from the Bureau of Public Roads shows estimated 1952 income for street and highway pur-

poses (including federal, state and local governments) as \$4,639,000,000. Expenditures for highway and street purposes for the same period are estimated at \$5,014,000,000.

The Bureau forecasts that highway revenues for 1953 will be \$4,926,000,000 and highway expenditures for the year will be \$5,453,000,000.

State Truck Roadoo

The Minnesota State Truck Roadoo will be held Aug. 1 and 2 at the Minnesota State Fair Grounds, Minneapolis-St. Paul, Minn.

College Journal

General Motors Corp. has announced publication of a magazine for educators and college engineering students. To be called the *GM Engineering Journal*, it will include articles by GM engineers about research, production and product engineering throughout the GM divisions. Material will be written for upper class undergraduates and (TURN TO PAGE 218, PLEASE)

COMMERCIAL CAR JOURNAL, August, 1953



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, 1953.



**"We have never had
a blowout or road failure
with NYLON CORD TIRES"**



"Our 26 tank truck trailers are in almost continuous service hauling fresh milk from Wisconsin to such distant points as Texas and Philadelphia," reports owner Frank Babbitt of Babbitt Brothers Transfer Co., in Bloomer, Wisconsin. "With loaded trailers weighing 60,000 pounds and truck speeds averaging 50 m.p.h., tires get a lot of punishment."

"We started using nylon cord tires in 1950, and ran a test on 56 of them to see how far they'd go before wearing out. Those tires were driven an average of 174,000 miles each without a blowout or a carcass failure. And they went this mileage on the original tread—without recaps. Our previous experience indicated that recapping didn't pay. Now we're recapping tires after

about 100,000 miles, and we're getting almost double the mileage we got from any other tire we've used before. So far, we have never had a blowout or road failure with a nylon cord tire."

Whether your fleet is large or small, you can make this test: Try one set of nylon cord tires. See how their remarkable resistance to bruising permits them to take hard body punches and safely support your heaviest loads. See how they reduce road delays and carcass failures . . . give a lower cost per mile.

A number of rubber companies have nylon cord tires available. (Du Pont makes nylon fibers, does not produce tires.) Ask your dealer about nylon cord tires today.

FREE BOOKLET on nylon tires—write for your copy. Textile Fibers Dept., Room 2520-J-8, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware. Offer good in U. S. only.

**NYLON CORDS PROTECT
AGAINST ALL THESE
CAUSES OF TIRE FAILURE**

HEAT—Nylon cords can withstand hotter temperatures than a tire will ever encounter on the highway in normal operations.

FLEX FATIGUE—Nylon's resilient strength makes tire cord stand up under the complex compression-tension flexing that takes place every time a tire turns—reduces flex-fatigue failure.

BRUISE DAMAGE—Nylon's toughness virtually ends cord ruptures caused by tires hitting curbs and holes at high speeds.

MOISTURE—Nylon minimizes tire failures caused by moisture seeping into cuts. Nylon's "water-resistance" is one of the reasons it's so popular for fishing lines and commercial fishing nets.



NYLON for TIRE CORD

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

COMMERCIAL CAR JOURNAL, August, 1953

217

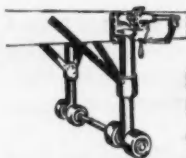
Holland
Engineered



TRUCK-TRAILER EQUIPMENT

FIFTH WHEELS

for every trucking application . . . including the Famous Holland-Apgar Safety Fifth Wheel that prevents tip-overs and jack-knifing.

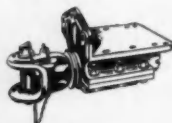


LANDING GEAR

both vertical and horizontal in a complete range of sizes.

PINTLE HOOKS

towing hooks, king pins and adapters, couplers or towing rings . . . the best that money can buy.



BETTER PRODUCTS FOR
BETTER PERFORMANCE



**HOLLAND HITCH
COMPANY**

HOLLAND

MICHIGAN

August Roundup

Continued from Page 216

for graduate students. Distribution to groups of other technically-minded readers is being considered.

1953 Truck Trailer Shipments*

| | May | Five Months |
|-----------------------------------|--------------|---------------|
| Vans | | |
| Insulated and Refrigerated | | |
| Steel | 103 | 372 |
| Aluminum | 289 | 1,420 |
| Furniture | | |
| Steel | 117 | 675 |
| Aluminum | | |
| All other closed-top vans | | |
| Steel | 1,179 | 5,004 |
| Aluminum | 1,028 | 4,945 |
| Open-top | | |
| Steel | 154 | 789 |
| Aluminum | 275 | 979 |
| Total—Vans | 3,145 | 14,184 |
| Tanks | | |
| Petroleum | 304 | 1,685 |
| Food | 25 | 152 |
| L. P. G. | 13 | 55 |
| All other | 26 | 167 |
| Total—Tanks | 368 | 2,059 |
| Pole, Pipe & Logging | | |
| Single Axle | 41 | 273 |
| Tandem Axle | 117 | 510 |
| Total | 158 | 783 |
| Platforms | | |
| Racks, livestock and stake | 419 | 3,122 |
| Grain bodies | 107 | 511 |
| Flats, all types | 943 | 4,384 |
| Total—Platform | 1,469 | 8,017 |
| Low-bed haulers | 417 | 1,776 |
| Dump trailers | 98 | 480 |
| All other trailers | 3,424 | 5,909 |
| Total—Complete Trailers | 9,079 | 33,208 |
| Converter dollies | 32 | 905 |
| Chassis only | 325 | 1,479 |
| Total—Trailers and Chassis | 9,436 | 35,592 |

*—Industry Division, Bureau of the Census.

Elections

In the recent elections of the Society of Fleet Supervisors, New York City, Thomas J. Berk, Metropolitan Life Insurance Co. assistant safety director, was elected president. Other new officers include: vice president—John M. Kavanagh, Hegeman Farms Corp. fleet supervisor; secretary—Seymour Steiner, Meyer 1890 Bottling Corp. fleet supervisor; and treasurer—John Dysort, Gottfried Baking Corp. fleet supervisor.

(TURN TO PAGE 220, PLEASE)

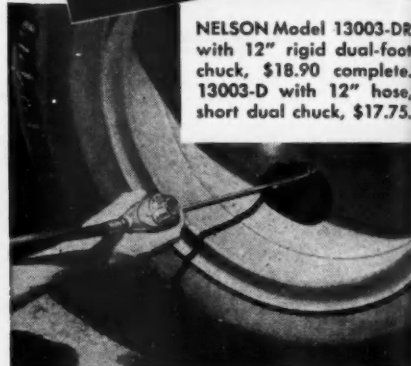
Classified Advertisement

SALES MANAGER WANTED—A National Manufacturer of heavy off the road and truck equipment has an opening for an experienced Sales Manager for West Coast operation. Applicant must be thoroughly familiar with the heavy equipment market including Municipal and State Agencies. Applicant must be familiar with the establishment of dealerships and distributors; he must also be experienced in the training of salesmen. Forward complete resumes including salary and experience. Box 11, Commercial Car Journal, Chestnut & 56th Sts., Philadelphia 39, Pa.

*Save Time
Save Tires*

WITH

**NELSON
EQUAMATIC
INFLATORS**



NELSON Model 13003-DR with 12" rigid dual-foot chuck, \$18.90 complete. 13003-D with 12" hose, short dual chuck, \$17.75.

SAVE TIME . . . just dial correct pressure, press chuck on tire valve stem; the NELSON "flips its own switch" when right pressure is reached. It's easy, it's fast—no gauge watching, no valving off!

SAVE TIRES . . . you get exactly equal pressures in each pair or set of tires, automatically! No "unbalanced" inflation to cause shimmy, hard steering, uneven tire wear. NELSON accuracy is *tops*; easiest inflator to keep accurate . . . recalibrate it right on air line! Get extra tire mileage by maintaining exact pressure recommended by manufacturer.

LOW COST . . . the NELSON costs little to buy, nothing to install, practically zero to maintain! It's simple, rugged; full year's service guarantee!



ADDED SAFETY . . . with Model 13003-S, grip chuck locks on stem. You just dial correct pressure, lock chuck on stem. Step aside, out of danger if loose rim lets go. Price complete, \$17.95.

START SAVING NOW . . .
order from your jobber or write us today for free literature.

**BARMATIC
PRODUCTS
INCORPORATED**

440
PERALTA AVENUE
SAN LEANDRO,
CALIFORNIA

* **EQUAL pressure in each pair of tires — AUTOMATICALLY!**

3

AJAX

the right jack for every job

Portable Hydraulics — 1½ to 50-ton sizes. For every tool box and every shop use, there's an Ajax jack that's right for the job: 1½, 3, 5, 8, 12, 20 and 50-ton capacities. Each is scaled for the job, from self-locking screw to rugged base. Low starting, high raising. Leak-proof leathers, shock-cushioned design. Ask your jobber to show you the complete lineup of Ajax Series 2900 jacks.



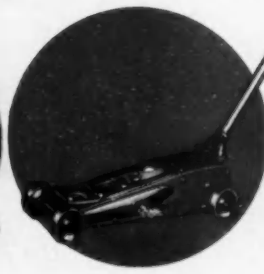
for every jack need...see your AJAX Jobber!



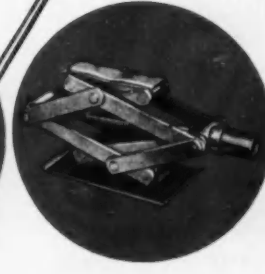
"Silver Horses"—low-cost, heavy-duty adjustable axle supports. 2-ton rating.



Hydraulic Service Jacks for shop or driveway. 1½, 2, 4 and 10-ton capacities.



Mechanical 1-ton service jack—weighs only 62 lbs. ...\$46.30 net to dealer.



Scissors Jacks—two fast-moving models. Finest quality, attractively priced.



Ajax Hydraulic Fluid—non-corrosive, preserves leathers, prolongs jack life.



The "coverage line" of quality jacks!

AJAX AUTO PARTS COMPANY • RACINE, WISCONSIN

THE TREND IS TO CHAMP-ITEMS

Self Tightening Hose Clamps



Features You'll Go For In Our
No. 656:

Instant, easy installation even in troublesome places.

Self-tightening. No adjustments.

Permanent tension—lasts life of car. Nothing to get loose or bind.

Impervious to rust or corrosion.

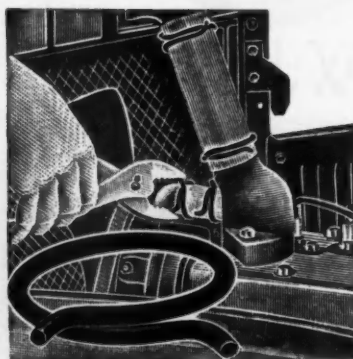
Simple to remove—No rusty nuts or bolts.

No sharp edges to cut or crush hose. Positive seal.

No fastenings to get loose or bind. Can be used over and over again.

Perfect for rubber, plastic and fabric hose carrying air, gases or liquids.

Used by leading car manufacturers.



CHAMP-ITEMS No. 656
Self-Tightening Hose Clamps
No. 656-P SPECIAL PLIERS for
ease of application.

ORDER FROM
YOUR JOBBER



CHAMP-ITEMS, INC.
6191 Maple Ave., St. Louis 14, Mo.

August Roundup

Continued from Page 218

Training Course

Pennsylvania State College Institute of Public Safety's 15th annual Motor Fleet Supervisor Training course will be held at the College, State College, Pa., Sept. 14-18. The program includes accident prevention, conservation of manpower and equipment, and efficient and economical operation for fleets.

E. W. Winans Dies

Earl W. Winans, recently retired as chief engineer after 38 years with Federal Motor Truck, died early last month. Prior to joining Federal, he was associated with such early pioneers in the automotive field as Electric Vehicle Co., Regal Motor Car Co., Maxwell Motor Co., R. C. Hupp Corp. and was president of the Dominion Motor Co., Toronto, Canada.

Gasoline Use Record

Consumption of gasoline in 1952 rose to an all-time peak of 46.4 billion gallons, according to the American Petroleum Institute.

New State Laws

Arkansas: S 445—providing that vehicles operating on an oversize or overweight permit shall not exceed 30 mph.

California: H 1237—increasing for the next two years by 1½¢ per gal the gasoline tax and by 2½¢ per gal the diesel fuel tax; increasing for the next two years weight fees on commercial vehicles by 33 per cent. For the eight years following the initial two years, gasoline taxes will be increased only 1¢ per gal above their present total and diesel fuel taxes 2¢ per gal; commercial vehicle weight fees will be increased only 22 per cent above their present total. H 555—exempting 3-axle tractor, 2-axle pole trailer combinations hauling large saw logs from gross weights permitted under axle spacing table. H 3087—exempting booms or masts of shovels or cranes from provision prohibiting load from extending more than 3 ft beyond front wheels or bumper. H 3255—requiring upper and lower half of fifth wheel be securely affixed to vehicles to prevent shifting; requiring locking devices on fifth wheels registered on vehicles after Jan. 1, 1954; requiring drawbars, hitches or couplings be securely mounted and adequate for weight drawn; requiring safety chains or cables in addition to regular trailer coupling. S 577—requiring registration cards be displayed on lower left corner of windshield. S 1945—requiring charter buses to carry public liability and

(TURN TO PAGE 222, PLEASE)

PUT PEP BACK INTO THOSE SLUDGE-<A>Y TRUCKS WITHOUT DISMANTLING!



Get rid of sludge and varnish in a little over an hour per truck. Write us for details on the Magnus 755 method of de-sludging without tear-down.



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38 South Ave., Garwood, N. J.

In Canada: Magnus Chemicals, Ltd., Montreal
Service Representatives in Principal Cities

**DITZLER GIVES PLUS VALUE IN DEPENDABLE
PERFORMANCE AND**

ECONOMY



IT IS ONLY NATURAL that the specifications a motorcar manufacturer sets up for the paints he uses on his products should be so very exacting. The sparkling lustre of a car contributes materially to its eye and sales appeal. The owner's satisfaction and pride are enhanced by the way this gleaming beauty stands up. Moreover, the manufacturer desires to attain this attractiveness with economical time and labor costs.

• Ditzler Finishes have been delivering a *plus* over specifications — in appearance, durability and workability — for more than fifty years. This practice of consistently giving more than is required has established and maintained Ditzler as the foremost exclusive producer of automotive finishes.

• Whether you buy original coatings or refinishing materials, you can be certain there is nothing better than Ditzler. No other products are so well-balanced to give you the utmost in dependable performance combined with unusual economy in application.

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PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

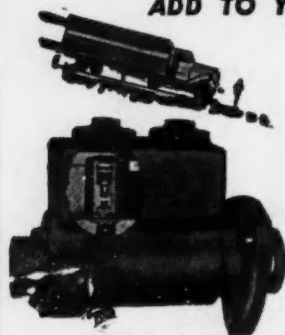
IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

DITZCO PRIMER SURFACERS OFFER YOU THESE 3 GREAT FEATURES

- 1** These tough, durable undercoaters have adhesion that cannot be matched by any other primer surfacer.
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- 3** They have such excellent filling properties that metal can be prepared with less time and effort.

Available in nine colors — light and dark gray, yellows, reds, green, cream and white.

ADD TO YOUR TRUCK SAFETY—CUT YOUR POWER BRAKE COSTS IN HALF!



MICO POWER BRAKE CYLINDER

STOP! The powerful 2-stage MICO Power Brake Cylinder progresses in mid-action from a low-pressure to a high-pressure cylinder. Insures smoother, surer stops. Replaces the hydraulic master cylinder. Simple to install.

MICO BRAKE LOCK

HOLD! Flip the switch—step on the brake pedal and you have more dependable holding power than ever before attained with any emergency brake. The MICO Brake Lock is simple to install in any hydraulic braking system.



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Both "V" TYPE and
ONE WAY BLADE TYPE
hand or power hydraulic control
FOR ALL MOTOR TRUCKS
FROM 1½ to 10 TONS

FRINK SNO-FLOWS, INC., CLAYTON, 1000 Isl., N.Y.
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HUNTER Cargo Cooler

DEPENDABLE REFRIGERATION AT LOW COST
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Water Pumps Wohlert

TO CHOOSE FROM
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OVER 70% OF ALL MAKES OF TRUCKS AND BUSES ARE Zollner EQUIPPED ZOLLNER HEAVY DUTY PISTONS

ZOLLNER MACHINE WORKS FORT WAYNE, IND.

August Roundup

Continued from Page 220

property damage insurance. H 1602—providing restrictions on vehicle lamps.

Colorado: H 212—altering time within which appeal can be made from order of Public Utilities Commission.

Connecticut: H 1574—prohibiting use of mufflers without interior baffle plates; requiring mufflers be parallel to longitudinal axis of vehicle or upward above cab or body; eliminating present provision requiring mufflers be constructed so individual explosions cannot be heard 150 ft from vehicle. H 1589—making it possible to prosecute either owner or operator for leaving a vehicle without setting brakes. H 1742—amending financial responsibility provisions. H 953—permitting a 2 per cent tolerance over registered gross weight; imposing penalties up to \$10 per cwt for overweight exceeding 25 per cent. S 30—requiring all vehicles to have fenders covering front wheel; requiring trucks, full trailers and semi-trailers of over 3 tons registered gross weight be equipped with mud guards or rear fenders. S 243—requiring turn signals when vehicles are constructed so that center top of steering post is more than 24 in. from left outside limit of body, cab or load, and also when there is more than 14 ft to rear limit of body or load.

Delaware: S 407—permitting auto transporters a height of 13½ ft.

Illinois: S 342—retaining present flat fee schedule on all weight classifications of trucks, intercity buses and trailers; providing an optional weight mileage tax for private carriers with mileage fees ranging from 1 to 80 mills. H 362—granting downstate cities power to levy a wheel tax of \$10 on vehicles of less than 35 hp and \$20 on vehicles of more than 35 hp.

Michigan: H 464—doubling fees for filing applications for permits and for refunds if applications are revoked or denied under Motor Carrier Act. H 445—giving authority to Highway Reciprocity Board to deny or withdraw privileges and exemptions granted under interstate compact as to operation by residents of other states.

Missouri: H 48—requiring turn signals or new vehicles registered after Jan. 1, 1954 when so constructed that top center

of steering post is more than 24 in. from left side of body or load or when more than 14 ft to rear limit of body or load.

Nebraska: LB 594 (replaces LB 78 which was repealed)—requiring new vehicles made after Jan. 1, 1954 be equipped with automatic turn signals. LB 114—providing a 5 per cent weight tolerance; providing penalty of not less than \$50 and not more than \$100 for overloads of 10 per cent or less, not less than \$100 nor more than \$200 for 10 to 20 per cent overload, not less than \$200 nor more than \$300 for 20 to 30 per cent overload, not less than \$300 nor more than \$400 for 30 to 40 per cent overload, not less than \$400 nor more than \$500 for 40 to 50 per cent overload, and \$500 for over 50 per cent overload; providing a new table of axle spacing without change in gross weights. LB 262—amending size and weight provisions and table of axle spacing without change to gross weights. In case of conflict between this bill and LB 114, above, LB 114 governs. LB 212—limiting 3-axle buses to a 40 ft length. LB 259—increasing, for a

(TURN TO PAGE 224, PLEASE)

HEAVY DUTY MOTOR TRUCKS

GASOLINE ELECTRIC
GENERATING SETS

DUPLIX

TRUCK COMPANY
LANSING, MICHIGAN

GALION

the name to remember for...

- HYDRAULIC HOISTS
- HYDRAULIC END-LOADERS
- DUMP BODIES FOR ALL PURPOSES

The GALION Allsteel Body Company

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Gordons Transports, Inc., Memphis, reports—

"Faster repairs, less down time with a National Oil Seal stock in the shop!"



NATIONAL OIL SEAL STOCKS TAILORED TO YOUR FLEET!

Why not follow the lead of America's foremost fleets? Speed repairs by stocking seals in your shop. Your jobber will gladly install and maintain a stock keyed exactly to your fleet's needs. Ask him about it next time he calls. You'll have faster, better maintenance and repairs, and economize on seal purchases, too!

Gordons Transports operates 600 units throughout the Mississippi Valley, and they're justifiably proud of their record for prompt, on-time delivery. Maintaining this record takes efficient preventive maintenance as well as fast clearance of equipment through the shop. That's why Gordons installs new oil seals every time an old seal is removed—and keeps a big stock of National Oil Seals right in the shop. Wheels and drive line assemblies get the best possible preventive maintenance, and there's no time lost getting parts. It's mighty good business—both ways!

**"Every time you take out an oil seal,
replace it with a new National seal!"**

NATIONAL MOTOR BEARING CO., INC.
General Offices: Redwood City, Calif.
Plants: Redwood City, Calif.; Van Wert, Ohio





Low Air Pressure Indicator

WIG-WAG

FOR
AIR BRAKES

The Wig-Wag mounts above the windshield, on driver's side. In horizontal position until warning is needed—the Wig-Wag instantly swings into driver's field of vision whenever air pressure drops below point required for safe air brake operation.

Visible from both inside and outside the vehicle when air pressure is low.
No electrical connections.
No radio interference.
No upkeep expense.
Complies with I.C.C. S 193.51.

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Reliable by Years of Service

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Time Savers...
KEN TIRE CHANGING **TOOLS**
...they're "Job Designed"

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T-22 T-5 T-21
T-27
T-18
T-23
T-20
T-19A
T-48
T-50
T-10
T-26
T-25 New Ford Tire Tool

KEN-TOOLS are hand forged from chrome nickel alloy steel...heat treated for extra long life...Best By Actual Test!

KEN-TOOL...
LARGEST EXCLUSIVE MAKERS OF
TIRE AND WHEEL
CHANGING TOOLS

See Your Local Jobber for Our Complete Line
The KEN-TOOL Mfg. Co.
Akron 5, Ohio

August Roundup

Continued from Page 222

two year period, registration fees from \$10 for ½ ton trucks to \$750 for 25 ton trucks. LB 107—providing for a tax on combustible gases and liquids used for motor vehicle fuel.

New Hampshire: H 437 authorizing increase in gasoline and motor fuel tax equal to present Federal tax. Such tax to become effective when Federal tax is repealed.

New Jersey: H 23—requiring motor vehicles made after July 1, 1954, be equipped with turn signals.

Oklahoma: H 741—extending temporary 1¢ per gal special fuel tax until May 31, 1955. H 1122—authorizing Corporation Commission to regulate for-hire transport of passengers or property. H 1123 prescribing fees to be charged for vehicle registration; providing for reciprocal compacts. H 742—providing for revocation of permit where holder has failed for a period of 30 days to provide service as contemplated by such certificate or permit. H 657—extending motor fuel excise tax levied on motor fuel imported into the state in fuel supply tanks and motor vehicles to May 31, 1955.

Texas: H 109—permitting ready-mix concrete trucks to operate with a tandem-axle load not exceeding 36,000 lb providing surety bond is filed with State Highway Dept. H 635—providing penalties for owners and operators of vehicles carrying greater gross weight than that for which they are registered.

Wisconsin: H 143—requiring every motor vehicle be equipped with speedometers which accurately measure speed. H 340—requiring vehicle permits for consumer milk distributors. S 308—providing for additional weighing stations for trucks. S 598—imposing a new truck registration fee schedule to replace old registration fees and the unconstitutional ton-mile tax. Dairy tankers and farm to primary market milk can haulers are given special reductions, and urban buses are kept at present levels in consideration of local government taxes.

END

Please Resume Reading Page 64

WATCH FOR
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COMMERCIAL CAR JOURNAL, August, 1953

**QUALITY
YOU CAN SEE**
in the world's most complete line
of replacement axle shafts!

**US
AXLE SHAFTS**

RIGIDLY TESTED
& INSPECTED

FINEST
ALLOY STEEL

HEAT TREATED

FIT EVERY CAR,
TRUCK OR BUS

THE U.S. AXLE COMPANY, INC.
POTTSTOWN, PENNA.

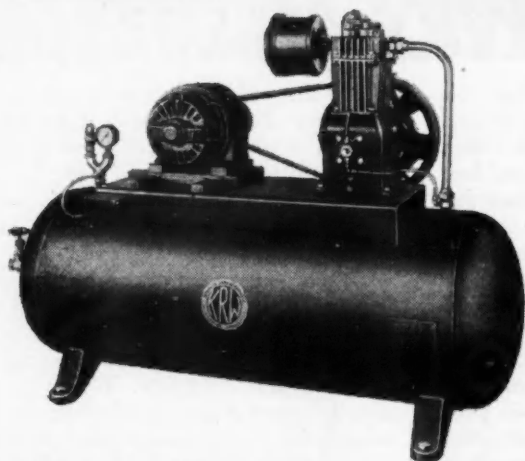
"THE WORLD TURNS ON U.S. AXLES"

YOU POCKET THE PROFITS

**WHEN YOU BUY
GARAGE EQUIPMENT
AT KRW's FACTORY-
TO-YOU PRICES!**



Getting the best automotive service equipment at lowest cost is just sane business! That's why it'll pay you to order yours direct from the K. R. Wilson factory. The world's oldest manufacturer of garage tools and equipment, KRW has been the leader in the automotive equipment field for 35 years. And KRW products are sold direct from the factory. You save the middleman's profit! KRW manufactures motor stands, rear axle dollies, jacks, air compressors, shop presses, valve refacers, battery chargers, hand tools and many other automotive service products. Next time, buy KRW and you pocket the profits.



**NO. 40-B 2 H. P., 2-STAGE
200 LBS. WORKING PRESSURE**

\$441³⁵

**COMPARE QUALITY!
COMPARE PRICE!**

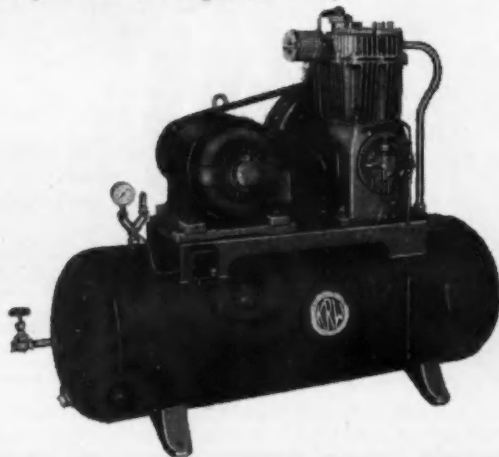
On these KRW Air Compressors

You'll find that KRW Air Compressors have all the features of other air compressors and are priced 20-40% less, because of KRW's factory-to-you selling policy. They have PLATE-TYPE, EASILY REMOVED VALVES, CONSTANT LEVEL OILING SYSTEM, COMBINATION FILTER AND AIR CLEANER, LOAD-LESS STARTING — a tamper-proof automatic device that unloads the compressor when it stops, PRESSURE CONTROL SWITCH with THERMAL RELAY that protects motor against overload. All KRW compressors available with Quincy DRI-R-AIR tank drain that automatically removes all water that collects in tank. Order your KRW compressor today!



**NO. 181 5 H. P., 2-STAGE
200 LBS. WORKING PRESSURE**

\$517⁹⁰



**NO. 839 10 H. P., 2-STAGE
200 LBS. WORKING PRESSURE**

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7-1/2 HP. MODEL ALSO AVAILABLE

ALL PRICES F.O.B. FACTORY, ARCADE, N. Y., PRICES SUBJECT TO CHANGE WITHOUT NOTICE. ORDER FROM DEPT. 85

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You can't win with **OVERWORKED BATTERIES!**

Team up with **AMERICAN BOSCH SPECIAL SERVICE GENERATORS**

Overworked pitchers head for the showers, but vehicles with overworked batteries wind up in fleet shops. That means maintenance headaches and lost time. Here's expense-saving relief for batteries overworked by 2-way radio, extra electrical accessories, short hauls or frequent idling . . . the new low cost, 55 amp. American Bosch GRC Special Service Generator.

Fast increase in charging rate gives you full 55 amp. output at only 15 mph . . . low cut-in provides 20 amps. at idle. The GRC is the smallest

heavy-duty Generator with this big output—only 2 units. It also features a hand-wound high-speed armature, ample 3 1/4" pulley, generous arc for belt drive. Precise voltage control is assured by the famous American Bosch 2-stage Regulator.

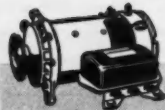
Solve your overworked battery problems with this American Bosch 55 amp. Generator-Regulator team. Keep batteries UP . . . maintenance, shop time and expense DOWN. Write for the details about the cost-reducing, battery-saving GRC . . . today! American Bosch Corporation, Springfield 7, Mass.



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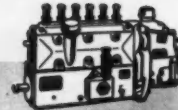
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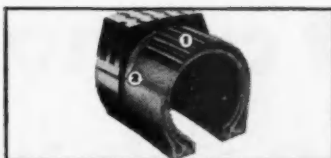
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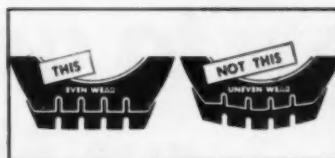


...and at regular truck tire prices

Mileage percentages are sometimes confusing. That's why we stress this fact: The new Cooper Mile-Master increases truck tire mileage up to 45% (honestly). And this big increase proved by actual tests on America's best known truck fleets. Not just another favorable new tire mileage percentage. Not just another figure out of thin air. The new Cooper Mile-Master is truly a great new truck tire. And your Cooper dealer is ready to honestly prove our claim. Call him soon.



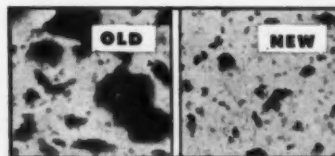
New Shock-Guard Construction: (1) Extra layers of cushioning and (2) full double cord breakers guard against high heat flexing, bruises, breaks, blowouts. Result: Cooler running, fewer failures.



New Flat Contour Treads: More rubber on the road, more contact area to carry the load. More stopping and starting power. More stability for the vehicle. Far less danger of uneven tread wear.



New Controlled Growth Rate: More recaps, better recaps. New Shock-Guard construction cushions away cord-stretching shock and strain. Cooper Armored Rayon-Cord fights fatigue and excess growth.



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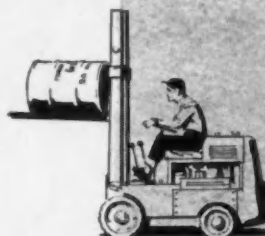
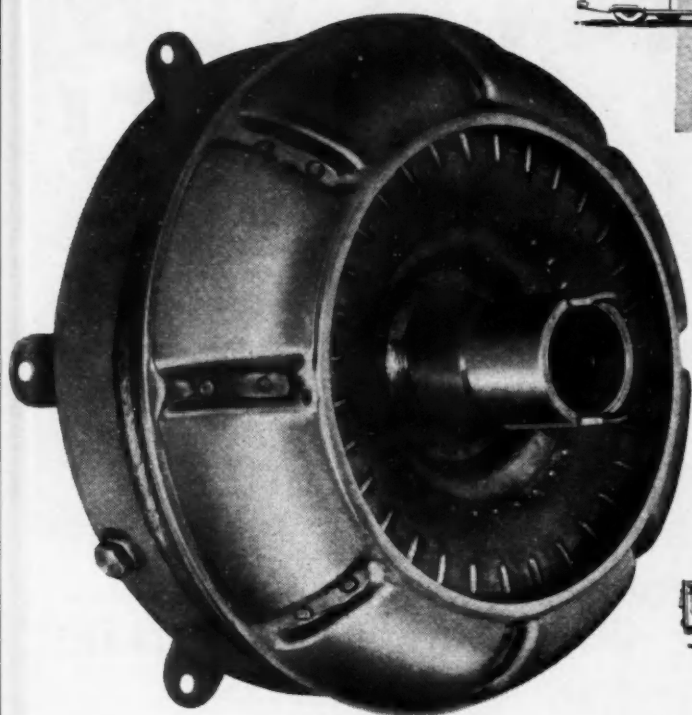
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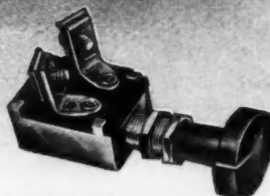
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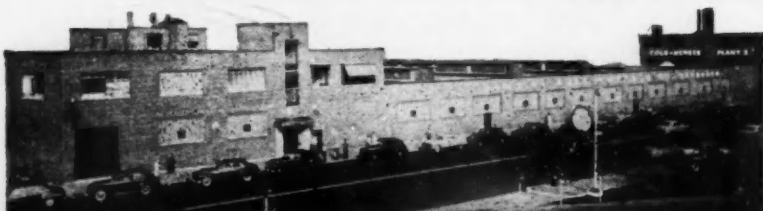
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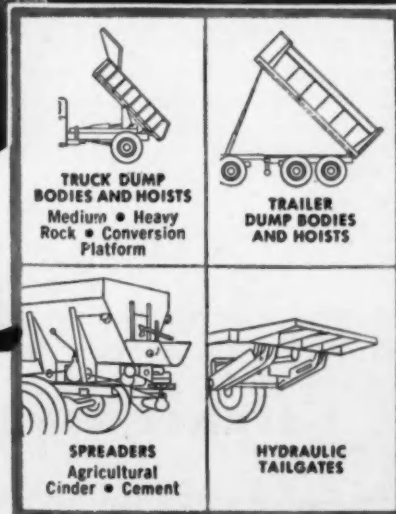
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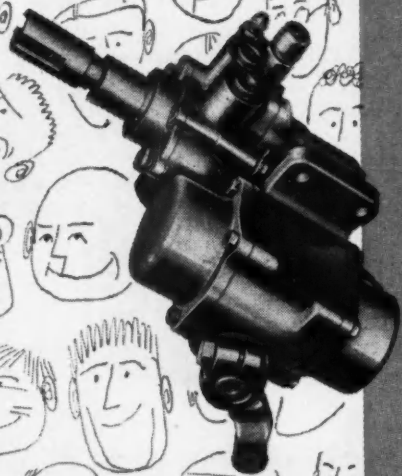


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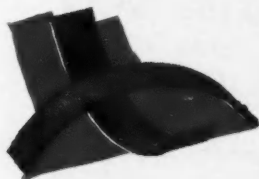
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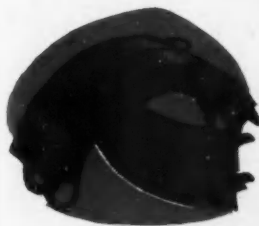
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LASCO BONDING BLOX, either plain or with the bonding agent applied, are available in SUPER BLOX and BLUE LABEL MATERIALS, in standard packages of 80 pieces.

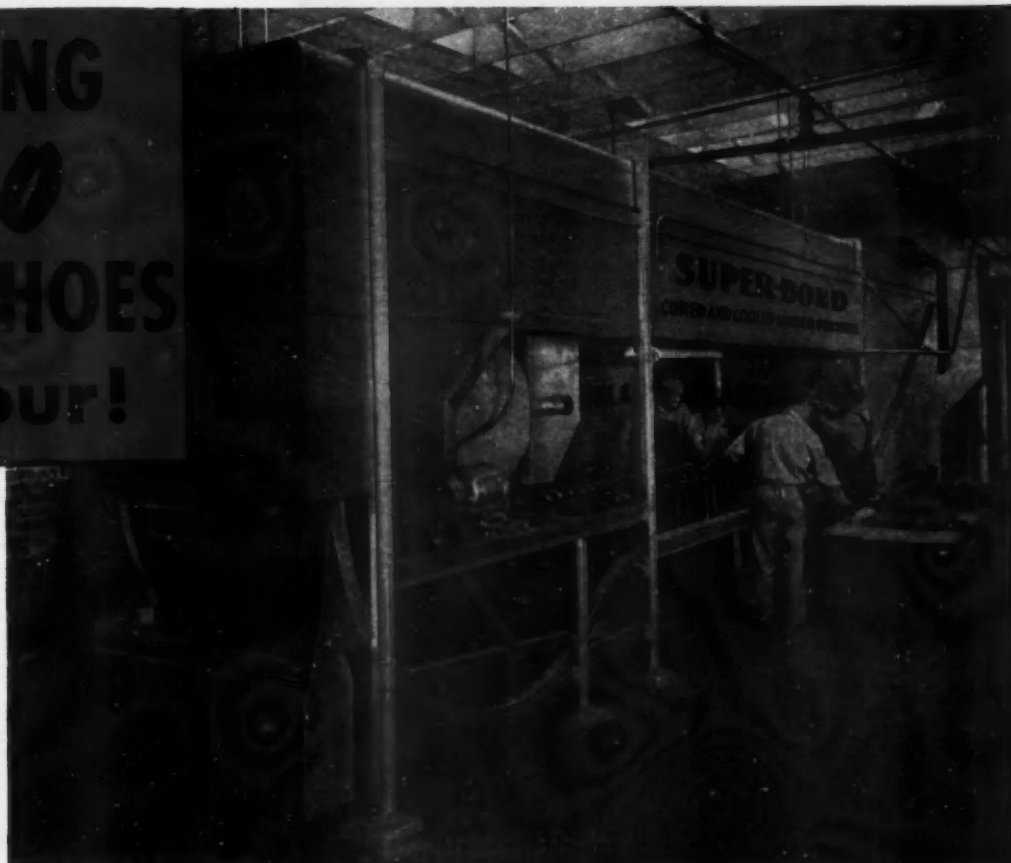
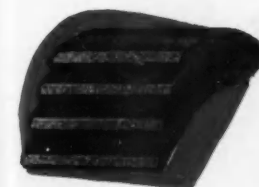


LASCO BRAKE SHOE EXCHANGES are also available in SUPER BLOX MATERIAL, either bonded or riveted. LASCO operates the largest and most modern brake bonding plant in the United States with a capacity of 30,000 shoes per day.



LASCO SUPER BLOX for trucks, trailers and busses are available in both drilled and undrilled sets in 3 different types:

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That's how one truck operator totals up his extra earnings per year with each Fageol Van.

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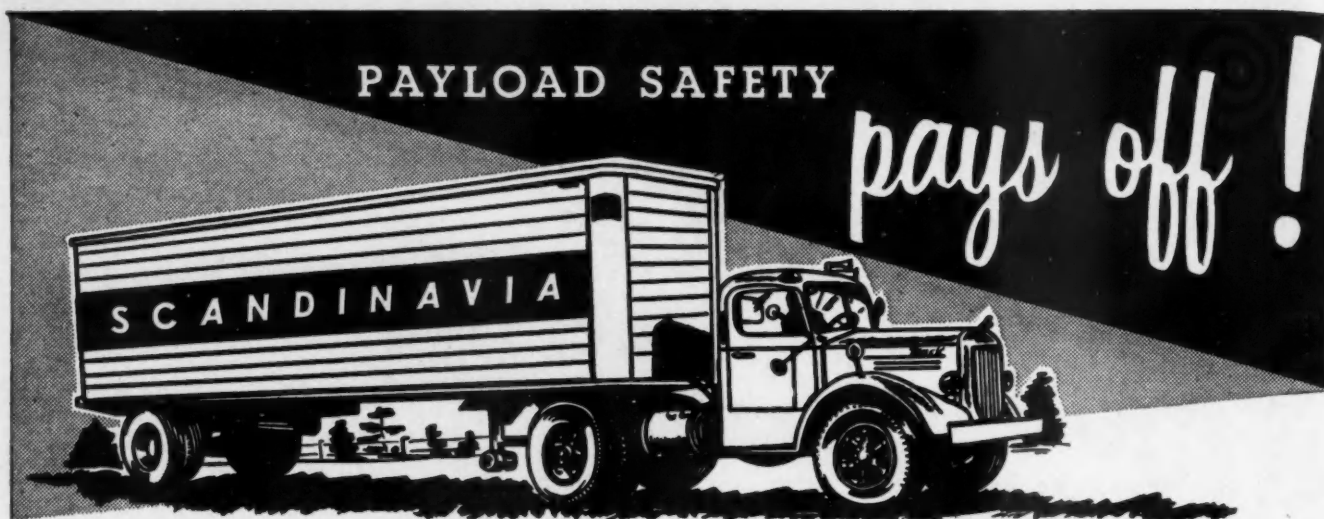
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***Fageol cubic capacity is increased over ordinary trucks of similar length because of elimination of waste space and use of only 4 ft. for engine and driver's compartment.**

Fageol Van Trucks are sold through all International Harvester motor truck dealers and branches.



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Prevents Vapor Lock

Result

- Better gas mileage
- Less frequent overhauls
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- Instant hot weather re-starts.
- 30 gallons per hour.
- Helium sealed—for longest life.
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- Only 7 watts power at maximum fuel delivery.

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Baltimore Transit steam cleans each of its 600 buses every 3000 miles; also all engines before overhauls and re-ring jobs. Maintaining this cleaning schedule is important, pays off in extra mileage, quicker overhauls, less downtime. That's why Baltimore five years ago switched to a MALSBARY Model 300 heavy-duty cleaner, now owns four—three clean continuously 8 hours daily, the fourth operates 3 shifts each working day!

MALSBARY Does More, Quicker

But dependability isn't the whole story. MALSBARY exclusive patented pumping system enables you to steam clean at 150-250 lbs. pressure, yet keep heat at 325°F. (an impossibility with other cleaners). Cold water at 400 p.s.i., blasts away corrosive dirt, grease and caked mud in 1/4 time required by steam vapor cleaners. You also can quickly degas, heat and clean tankers, strip surfaces for painting, handle many tough jobs others can't touch.

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WE CLAIM THAT

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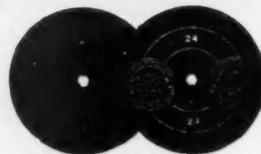
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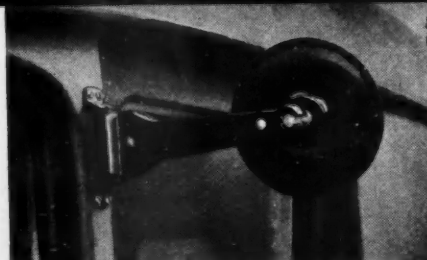
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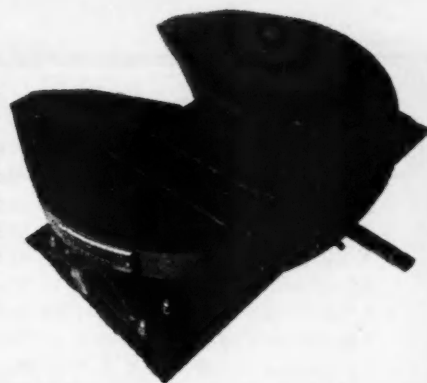
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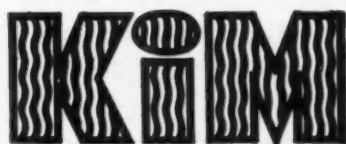
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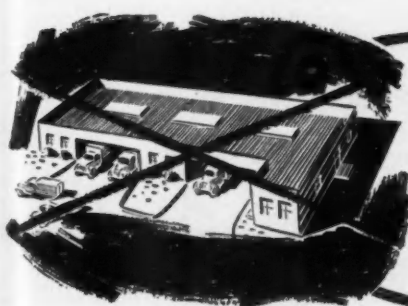


Hotstart

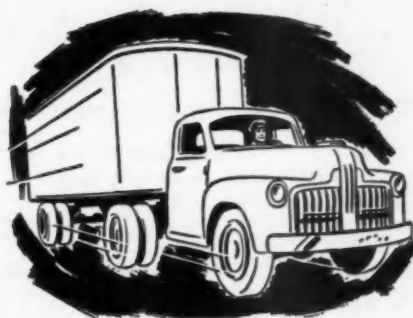
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electric pre-heater
pulls down

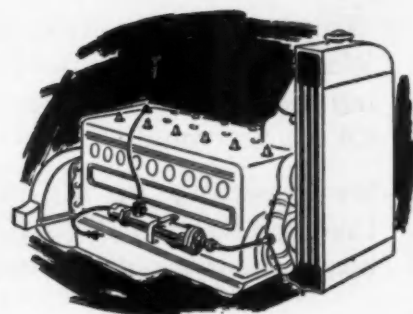
high winter costs



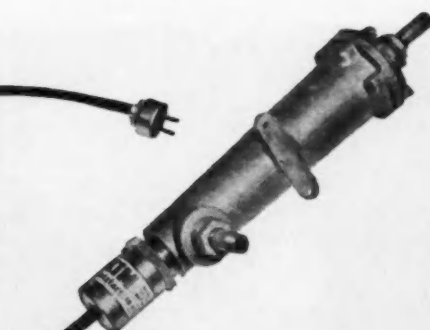
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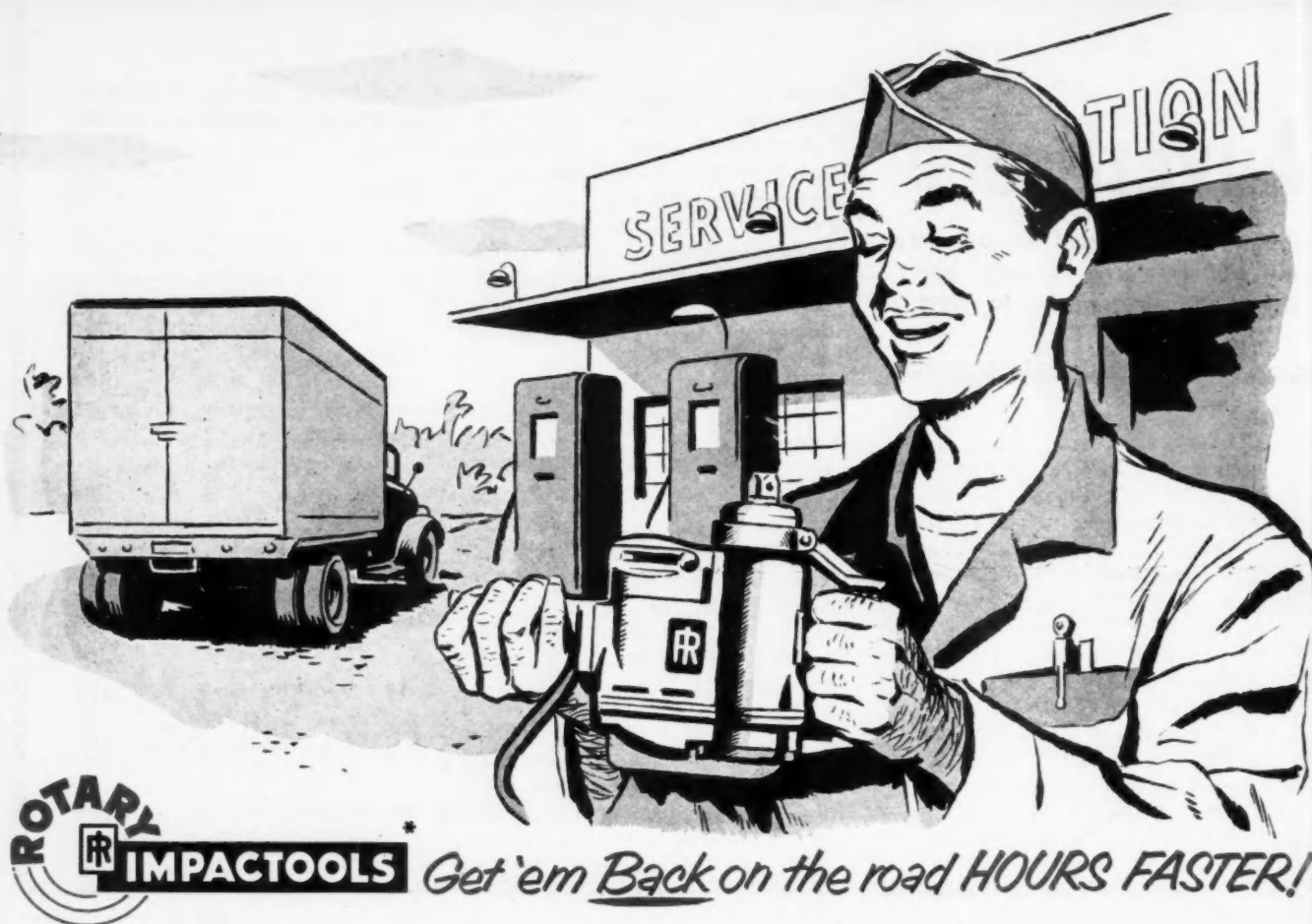
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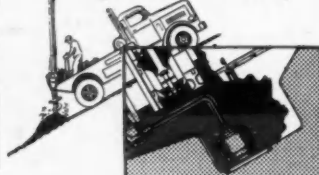
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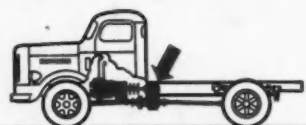
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